

**Immigrant Certified Nursing Assistants in Institutional Long-term Care  
Facilities: Language Proficiency, Communication Patterns and Quality  
Care**

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## **DISSERTATION ABSTRACT**

### **Background**

The population of the U.S. is rapidly aging and the number of elderly (65+) requiring some form of long-term care (LTC) is expected to sky rocket. While most LTC is provided in the home by paid or unpaid caregivers, the frailest and neediest elderly are cared for in LTC facilities such as nursing homes. In nursing homes, Certified Nursing Assistants (CNAs) provide the majority of hands-on care to elderly residents. Due to increased demand for direct care workers, direct care positions are increasingly being filled by immigrants. Immigrant status can impact provision of care in a variety of ways most notably due to factors that affect communication.

### **Research Objectives**

This study focuses on immigrant CNA communication patterns and quality of care. The objectives are: a) to describe immigrant CNA patterns of communication; b) to explore the relationship of background characteristics to communication; c) to examine the relationship of communication to quality; d) to describe the relationship between immigrant CNAs' language proficiency, communication patterns and quality; and e) to examine the correlation between immigrant CNAs' self-ratings and expert ratings.

### **Methods**

This study utilized an exploratory description design employing videos of a simulated nursing home resident in a "talk to the camera" design. A convenience sample of 35 immigrant CNAs provided brief responses to 9 care challenge videos that depicted a 78 year old nursing home resident in scenarios typical of nursing home settings. CNAs

responses to the 9 care challenges were videotaped. After responding to the 9 care challenges, subjects viewed the care challenge videos again and provided “think aloud” responses to open ended questions about their care choices and provision of care for each care challenge. Quantitative ratings and qualitative assessments of quality were assigned to the CNA responses by CNA experts. Linguistic experts provided ratings of spoken English proficiency. CNAs provided self-ratings of quality and language proficiency. CNAs’ responses to the care challenges were coded using the Roter Interaction Analysis System (RIAS). Descriptive statistics and associations were calculated for variables relevant to the study objectives. Qualitative analyses were conducted on the CNA experts’ quality assessments and CNAs’ “think aloud” responses

## **Results**

Analysis of RIAS composite categories indicate that participants attended almost equally to instrumental and socio-emotional communication. Instrumental communication comprised slightly more than half of all CNA talk (54.4%) while socio-emotional communication comprised 45.5% of all CNA talk. The relationship between quality and type of communication differed across the nine care challenges. Similarly, communication behaviors associated with language proficiency differed for the nine care challenges. There was a significant correlation between quality and spoken English proficiency. Immigrant CNA quality was related to age and years on the job. CNAs with the highest quality ratings were least likely to plan to continue working as CNAs. Qualitative analysis identified eight themes relating to factors that impacted quality of care: language use, orientation, giving choice, seeking help, assessing the situation, meeting psychosocial needs, lying/giving false reassurance and building relationships.

## **Conclusion**

These findings highlight the importance of pre-certification training, certification standards and post-certification training and supervision. In provision of CNA care, quality is context dependent. The appropriateness of the CNA's response depends on the particular care challenge. Training should prepare immigrant CNAs to respond appropriately to a variety of care challenges. Results also highlight the importance of spoken English proficiency. That CNA spoken English proficiency is related to quality, suggests the need for a minimum standard of spoken English proficiency prior to certification. Results of the qualitative analyses offer insight into factors associated with immigrant CNA care quality and confirm the need for ongoing CNA training opportunities for immigrant CNAs and suggest specific areas to target in post-certification training.

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## INTRODUCTION

### Background

#### *Aging Americans*

In 2011, “Baby Boomers,” the largest generation in American history, began turning 65. By 2030 the number of Americans over age 65 is predicted to be almost 80 million (Kaye, Harrington, & LaPlante, 2010). The number of people aged 85 and older, “the oldest-old,” is expected to increase by 350% to almost 20 million by (Greenberg, 2010). While these demographic shifts are due in part to changing patterns of birth and death rates, increased life expectancy is a major factor in the dramatic increase in elderly in the U.S. (as well as worldwide).

Health care and quality of life for the elderly are important concerns. Almost 80% of all elderly (65 and older) people in the U.S. have at least one chronic condition; 50% have at least two. Among the conditions most prevalent and debilitating to the elderly are arthritis, diabetes, heart disease, osteoporosis, obesity, cancer and Alzheimer’s (the most common cause of age related dementia) (National Center for Health Statistics, 2007).

Along with eventual physical and mental decline, most older adults at some point lose the ability to independently carry out the Activities of Daily Living (ADLs) (eating, bathing, dressing, using the toilet, transferring, and walking across the room) (Bookman, Harrington, Pass, & Reisner, 2007). It is estimated that up that 27 percent of community based adults over age 65 need assistance with one or more ADLs. This assistance is most often provided by unpaid caregivers, often family members. Paid paraprofessional caregivers (licensed and unlicensed home health aides) provide a significant, though



smaller, proportion of direct care to the elderly either as full time care givers or as part time help to unpaid caregivers (Fineberg, 2008; Kane, 2001).

Most elderly people in the United States prefer to remain in the community and recent policy changes are making it possible for more people to remain in their own homes utilizing paid care and community resources (Commission on Long-term Care, 2013). However, it is sometimes necessary for people who need extensive assistance with ADLs or medical care to relocate to long-term care (LTC) facilities where they can receive ongoing, professional assistance. In fact, it is estimated that four out of every 10 older people will require a period of LTC at least once. The percentage of elderly in LTC facilities increases dramatically with age. Those over age 85 are four times as likely to live in a nursing home as those aged 75 to 84 (Jones, 2002, Stone, 2000).

#### *Long-term care*

LTC is not cheap. In 2004, national spending on older adults totaled about \$135 billion. One-third of all expenditures are paid out-of-pocket by elderly consumers and their families (Fineberg, 2008). The Medicaid program is the major public payer for long-term care. Medicaid covers services in nursing homes but does not always cover home care for low-income individuals (although there is a shift in this direction). This is the major reason for the increase in the number of African Americans and other minorities in LTC facilities. Up until the 1990s, LTC facilities housed mostly white people. That trend has reversed as whites, generally more advantaged, have access to care alternatives and longer periods of functional aging (Bishop, 1999; National Center for Health Statistics, 2007; Stevenson & Grabowski, 2010).

### *Staffing of LTC facilities*

Physicians are the primary health care providers of acute care of the elderly and are often involved in both formal (provided by paid professionals either in the home or in an institution) and informal (provided by family, friends outside of an institution) care (Collier & Harrington, 2008). In LTC facilities, however, nurses provide the majority of skilled services (Decker et al., 2003). Nurses often function primarily in a supervisory role rather than a care giving role (Decker et al., 2003). The vast majority of direct care in LTC facilities is performed by low-skilled frontline workers (R. I. Stone, 2001)). In LTC facilities, nurse aids (NA) or certified nursing assistants (CNA), perform most of the hands-on care (Squillace et al., 2009). Of all the staff in the nursing home, these paraprofessional workers have the most contact with the elderly (R. I. Stone, 2001) providing 80 percent (or more) of direct care (Harmuth & Dyson, 2005).

### *CNA Work and Training*

The primary task of CNAs is to assist residents with ADLs, including bathing, dressing, eating, and toileting. In addition, dependent on individual state regulations, CNAs can perform a variety of clinical tasks such as taking blood-pressure readings and, in some states, administering oral medications (Pennington, Scott, & Magilvy, 2003; Squillace, Remsburg, Bercovitz, Rosenoff, & Branden, 2007). CNAs are required to physically lift, move and reposition frail, immobile residents. Residents suffering from some form of dementia may be confused and lash out physically or verbally. Residents may be resistant or uncooperative. In this way, CNA work can be physically and emotionally demanding (Foner, 1994). CNAs are a crucial part of the care giving team,

not just because they do the grunt work, but also because their close contact with patients gives them access to information that can be clinically important. Physicians and nurses rely on reports from CNAs particularly about unusual circumstances (Kohn, Corrigan, Donaldson, & others, 2000).

The Omnibus Budget Reconciliation Act of 1987 established federal requirements for the education and training of CNAs. CNAs working in Medicare- or Medicaid-certified LTC facilities are required to successfully complete at least 75 hours of state-approved training by, or under the general supervision of, an RN with at least 2 years of experience in nursing and at least 1 year of experience in a long-term care environment. Training must include 16 hours of supervised training in a clinical setting. In addition, CNAs must pass a competency evaluation or state certificate exam, which includes a clinical skills element (Wiener, Freiman, & Brown, 2007). Exams are administered in English, but arrangements may be made for an oral exam to accommodate those with limited reading proficiency.

Direct LTC (DLTC) workers are the lowest paid workers in the LTC industry (Bureau of Labor Statistics, U.S, Department of Labor, 2004). Many work part time, and the median hourly wage is significantly lower than the U.S. average. (Bureau of Labor Statistics, U.S, Department of Labor, 2004; Squillace et al., 2007). Few DLTC jobs offer health insurance or other benefits. In these positions, opportunities for advancement are minimal. Consequently, the turnover rate for DLTC workers are high (Squillace et al., 2009). National studies cite annual turnover rates in nursing homes ranging from 45 to 105 percent. (R. I. Stone, 2001).

DLTC work is among the most rapidly growing service occupations in the United States. According to the Bureau of Labor Statistics, DTLC occupations (CNAs and home health aides) will be the second- and third-fastest growing occupations in the United States between 2006 and 2016. Already, there is evidence of worker shortages in the LTC system. Two-thirds of states reported CNA shortages in the 2007 National Nursing Home Survey (Squillace et al., 2009).

### *Immigrant CNAs*

In the LTC industry as well, managers, and increasingly, policy makers are looking to immigrant women to make up for shortages in LTC workers (Leutz, 2007; Redfoot & Houser, 2005). The overall percentage of foreign-born CNAs increased from 6% in 1980 to 16% in 2003 (Redfoot & Houser, 2005). In LTC facilities, about a fifth of CNAs were immigrants in 2004 (G. Khatutsky, Wiener, & Anderson, 2010). In large metropolitan areas, as much as one third of CNAs may be foreign born and in individual facilities, up to 100% of direct care workers may be immigrants (Redfoot & Houser, 2005).

Immigrant CNAs differ from non-immigrant CNAs in some significant characteristics. Demographically, immigrant CNAs were found to be older than non-immigrants and not surprisingly, much more likely to be minority. The immigrant CNAs were more educated than their non-immigrant counterparts (some having trained as RNs in their native countries.) (G. Khatutsky et al., 2010; Redfoot & Houser, 2005). Most immigrant CNAs work in states where there are a lot of immigrants in general,

(California, New York, Texas, Florida and Illinois) and most work in facilities located in metropolitan areas (96.4%) (G. Khatutsky et al., 2010).

Employers report that immigrants are highly committed to working with the elderly, but that immigrants present unique challenges. Communication is the dominant challenge for immigrant CNAs in nursing homes (Browne & Braun, 2008). Language issues, both knowledge of the language and speaking ability/accent, often lead to perceptions of poor care (G. Khatutsky et al., 2010).

#### *CNAs and Nursing Home Quality*

In nursing homes, quality is generally measured in three interrelated domains: structure, process and outcomes. Structural factors comprise the caregiving context and include elements of the physical environment, organizational variables and available resources. Process involves elements of direct care such as diagnosis, treatment and education and included both technical and interpersonal elements of care. Outcomes refers to impacts of care on patients or populations. CNA care is related to two domains of nursing home quality. Structural quality is impacted by staffing levels and turnover while process quality is impacted by CNA delivery of care. Because CNAs perform the majority of hands-on care of nursing home residents, the quality of CNA care has a direct impact on resident outcomes including health status and satisfaction.

Because process encompasses all aspects of care delivery, measuring process is often seen as equivalent to measuring quality of caregiving. On the other hand, evaluating the quality of nursing care often involves subjective evaluations of quality rather than or in addition to the assessment of quality indicators.

### *Provider-Patient Communication*

Effective provider-patient communication is related to process quality.

Communication between providers and patients contains both verbal and non-verbal elements. Non-verbal behavior has been shown to have a significant role in medical care (D. Roter & Hall, 2006). Other studies confirm the importance of non-verbal behavior and indicate that physicians who are more non-verbally expressive tend to have higher patient satisfaction ratings (Friedman, Prince, Riggio, & DiMatteo, 1980). Several studies have demonstrated that the verbal content of a visit may be less predictive of patient satisfaction than the overall emotional tone of the visit (J. A. Hall, Roter, & Rand, 1981; D. Roter, 1987).

One recommended model of patient communication is patient centered care which can be defined as care that responds to the wants, needs, and preferences of patients and their families and allows them to participate in decisions about their care. Patient-centeredness is recognized as an important aspect of health care quality (Greenberg, 2010).

### *Cultural Barriers to Effective Communication*

Communication problems between patients and health care workers are often at the root cause of inadequate medical treatment, errors, even death. One obvious hindrance to intercultural communication is lack of language understanding between providers and patients. Linguistic barriers can lead to a number of negative consequences such as an increased chance of non-compliance, feelings of fear and despair and problems in achieving rapport. Poor language proficiency is negatively related to patients' perceptions of the quality of provider patient communication (Ramirez, 2003). Lower

patient satisfaction ratings of International Medical Graduates (IMG) were correlated with poor perception of English language ability. This was true even for IMGs who scored high on tests of English language ability (Eggly, Musial, & Smulowitz, 1999).

It is not clear though, that linguistic difficulties are the predominant factor in poor provider patient communication (M. A. Stone & others, 1998). Less obvious than language barriers, socio-cultural differences between patient and physician can also influence communications and ultimately clinical decision making (L. M. . Ong et al., 1995). In one study, IMGs cited new and unfamiliar cultural norms and expectations (more than language) as sources of problematic communication with patients. There is more misunderstanding, less compliance and less satisfaction in intercultural medical consultations compared to intra-cultural medical interactions even after adjusting for socioeconomic variables such as income and education (Dorgan, Lang, Floyd, & Kemp, 2009). Cultural differences can result in a high risk of poor communication because these differences are correlated with different communicative rules, symbols, behaviors, and manners of interaction (Yum, 1988).

#### *Nurse-patient communication/CNA-patient communication*

There are numerous documented benefits to effective nurse-patient communication ranging from reducing patient anxiety and fears to quicker recovery times (Fielding & Llewelyn, 1987). Studies suggest that effective communication between older adults and care providers, are associated with longer life, improved health and increased patient satisfaction (Estes & Rundall, 1992)(Estes & Rundall, 1992; (Kiely, Simon, Jones, & Morris, 2000). There has also been much criticism of nursing communication (or lack of it). Although Nurses reportedly enjoy communicating with

patients, the actual time spent in interaction is comparatively small (Caris-Verhallen, Kerkstra, & Bensing, 1997). In one observational study, average nurse–patient interaction time in a long-term care facility was less than 30 minutes per day (Morse & Intrieri, 1997). Lack of patient centered care is another common criticism of nurse-patient communication. For example, nurses tend not to ask patients about their care preferences. Gibb and O’Brien found that nurse’s communication with elderly patients elicited little verbal elaboration from the patients (Gibb & O’Brien, 1990).

Organizational culture may be responsible for communication deficiencies (Chant, Jenkinson, Randle, & Russell, 2002; Erber, 1994; Menzies, 2001). In the past, nurses were not encouraged to establish therapeutic relationships with patients in order to decrease caring related stress (Wilkinson, 1991). Consequently, some nurses do not believe social interaction with patients is part of their job. Also, since the goal of many institutions is to meet the basic needs of residents, verbal interaction is not valued. Nurses (and other staff) often feel pressured to keep working rather than talk to patients (Perkins & Nolan, 1993).

While much of the literature on nurse-patient communication is also applicable to the CNA context, there is relatively little literature that focuses particularly on CNA-patient communication. As studies have shown with nursing care, it seems that CNA care suffers from lack of communication as well. Observation of CNA’s work behavior in nursing homes revealed that a mere 11.8% of CNA work time was engaged in staff–resident verbal interaction (Burgio et al., 1990) and neutral interactions (with neither positive nor negative affect) appear to be the norm (Burgio et al., 1990; Carstensen, Fisher, & Malloy, 1995).



It has been shown that positive CNA-patient communication is associated with better patient outcomes. For example, Roth, Stevens, Burgio, and Burgio (Roth, Stevens, Burgio, & Burgio, 2002) found that affective communication initiated by CNAs decreased agitated behavior in residents. As with nurses, however, it has been shown that CNAs do not initiate much communication with residents, even during care (Nussbaum, 1993; Simmons, Babineau, Garcia, & Schnelle, 2002). Indeed, CNAs, themselves, recognize a need to enhance their communication skills (Ripich, Wykle, & Niles, 1995).

The current literature on CNA-resident interaction in LTC settings includes intervention studies intended to enhance care giving quality particularly with residents diagnosed with dementia (Levy-Storms, 2008). The goal of these has been to increase “therapeutic communication” between CNAs and residents who have cognitive impairments. These studies have demonstrated improvements in patient outcomes and ratings by improving CNA communicative efficacy (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004; McGilton & Boscart, 2007; P. D Sloane et al., 2004; Williams, Ilten, & Bower, 2005). Qualitative observational studies of CNA communication with patients have found that while much CNA speak is instrumental and repetitive, there are notable patterns of affective CNA communication (Carpiac-Claver & Levy-Storms, 2007; Medvene & Lann-Wolcott, 2010). None of the studies of nursing or CNA communication focus on immigrant status or account for cultural and linguistic factors that affect communication.

## **Study Aims**

The overall goal of this research is to examine the background characteristics and communication patterns of immigrant CNAs and factors that affect immigrant CNAs' quality of care.

The specific aims of this research are to:

- 1) to describe patterns of routine communication used by immigrant CNAs in a standardized care case.
- 2) to examine the relationship between immigrant CNA communication patterns and expert ratings of quality.
- 3) To describe the relationship between immigrant CNA spoken English proficiency, language patterns and quality.
- 4) to examine the relationship between immigrant CNAs' self-ratings and expert ratings
- 5) To describe factors related to quality CNA care

**Factors Associated with Immigrant Certified Nursing Assistants' Provision of Care:  
an Integrative Review of the Literature**

**Aim:** To identify factors related to immigrant Certified Nursing Assistants' (CNAs) provision of care in institutional long-term care settings such as nursing homes.

**Background:** CNAs provide the majority of daily, hands-on care to residents of institutional long-term care facilities. Approximately one-fifth of all CNAs are immigrants. Little has been done in the long-term care industry to effectively integrate these immigrants into the long-term care workforce.

**Methods:** A manual and electronic database literature search was conducted from January 1984 to May 2013. Qualitative content analysis was completed for the 18 articles that satisfied the inclusion criteria.

**Results:** There were four factors related to immigrant status that had an impact on quality of care in institutional long-term care settings. These were: language and communication, cultural attitudes and beliefs, perceptions of racism and discrimination and turnover and satisfaction.

**Conclusion:** Given increasing reliance on immigrants in the direct care labor force, it is important to consider how policies, training and work environment can influence immigrant CNAs' ongoing ability to provide care.

## **Introduction**

In line with global trends, the U.S. population is growing older and more diverse. Within the next two decades, the over-65 population is projected to more than double, to 70 million. By 2050, there may be as many 27 million elderly requiring some form of long-term care (LTC) (Harrington 2010). Though the majority of LTC is provided by informal care givers, millions of elderly will require care in LTC facilities such as nursing homes. Nursing homes provide both assistance in daily living tasks as well as on-going medical care for the acute and chronic conditions that become more prevalent with age. In nursing homes, Certified Nursing Assistants (CNAs), as frontline, direct care workers, provide up to 90% of hands-on care to elderly Americans. In addition to assisting with the routine tasks of daily life such as bathing, toileting, mobility and feeding, CNAs provide comfort and socialization to elderly residents in nursing home facilities. In many cases, CNAs are also charged with minor clinical tasks such as routine monitoring of vital signs, administration of medicine and health status monitoring. CNA work is physically and emotionally demanding, but these jobs are low-wage and offer few opportunities for advancement.

However, because of increasing demand, direct-care workers, including CNAs, are one of the fastest-growing workforces in the country. As in many other high demand, low-wage professions, CNA positions are increasingly being filled by immigrants. CNA positions require minimal training and literacy and are, therefore, attractive to recent immigrants who arrive in the U.S. needing quick employment. According to recent data, foreign-born workers make up one-fifth of the total CNA workforce, but in metropolitan

areas the proportion of immigrant CNAs working in nursing homes is generally much higher (G. Khatutsky, Wiener, & Anderson, 2010).

Elderly nursing home residents and immigrant CNAs meet at an intersection of language, caregiving, culture and society. How immigrant CNAs perform their roles as caregivers can affect the quality of care for the millions of elderly Americans who will require care in the coming decades. The purpose of this paper is to conduct a review of the literature to determine how factors related to CNAs' immigrant status affect provision of care in LTC facilities.

## **1. Methods**

Following the method for integrative reviews outlined by Whittmore and Knafl (2005), a comprehensive search for relevant literature was conducted using the following electronic databases: PubMed, Web of Knowledge, CINAHL and Google Scholar. Keywords included Certified Nursing Assistant, Nursing Assistant, Nurse Aide, direct care and long-term care. As recommended, the search was expanded by scanning reference lists of articles for additional items. Approximately 150 relevant documents pertaining to direct care of the elderly were reviewed, and 18 were selected for this review.

### *1.1 Selection*

The following criteria were used in the selection: (1) Definition of CNA: For the studies reviewed here, the terms CNA, Nurse Aide and Nursing Assistant were used interchangeably. Additionally, the terms direct-care worker and front-line worker were often used to refer to CNAs as well as HHAs and others working in direct care. Because certification proffers a minimum set of standards, this review only considered studies that

clearly distinguished CNAs from other occupational groups. (2) Setting: This review focused on CNAs working in institutional LTC settings such as nursing homes. LTC facilities differ from assisted living facilities and care homes in the level of care provided and the amount of supervision given to direct-care workers. LTC facilities typically house residents who require greater levels of clinical care and/or assistance with Activities of Daily Living (ADLs). This type of setting typically utilizes a hierarchical model of supervision and management where CNAs report to a charge nurse and care is overseen by a supervisor. Although Home Health Aides (HHA) are often certified, studies focusing on HHAs were not included in this review because the skills required to provide in-home care differ from those required in nursing homes. (3) Location: Only studies conducted in the United States were included in this review. Although much work on CNAs has been done in other countries, the differences in health care systems, access to care, population served, and cultural practices and behaviors make cross-national comparisons difficult. (4) Immigrant Status: For the studies reviewed here, immigrant status is not uniformly defined. In analysis of the National Nursing Assistant Survey (NNAS), immigrant status was defined as “persons who are not American citizens or who are American citizens not born in the United States (naturalized citizens)” (Khatutsky, Wiener, & Anderson, 2010). In contrast, other studies use citizenship or native language as a proxy for immigrant status or do not clearly distinguish immigrants from non-immigrants. Thus, the definition of immigrant status used by each researcher was allowed to stand, and studies that addressed characteristics of CNAs in general but which drew from samples made up entirely or mostly of immigrants are included in this review. (5) Types of studies: This review covers both analysis of large scale survey such as the

NNAS and smaller qualitative studies. (6) Focus: Articles that provided insight into provision of care and quality of care were included. Those that focused exclusively on labor force shortages, turn-over, retention, training or migration patterns were excluded because these did not contribute to knowledge about provision of care. (7) Time period: The inclusion period was from 1987, when the Omnibus Budget Reconciliation Act of 1987 (OBRA) established certification for nursing assistants, to 2013.

The sample of 18 articles chosen based on the selection criteria is detailed in Table 1. The purpose, sample, type of study, analysis methods, key findings and thematic contribution to this review are outlined. While there are relatively few studies related specifically to immigrant CNAs, in recent years there has been mounting interest in this pivotal population. Examining evidence related to factors that influence immigrant CNAs' caregiving revealed the following themes which will be discussed in this paper: difficulties related to language and communication, cultural attitudes and beliefs, perceptions of racism and discrimination and turnover and job satisfaction.

## **2. Background**

### *2.1 CNA Work*

The difficult work of a CNA can be divided into two types of work: Instrumental work includes assisting residents with ADLs (such as dressing, bathing, ambulation, toileting, eating) and Psychosocial work includes communication tasks such as comforting and socializing. The instrumental aspects of CNA work are the "dirty work" that is less valued by society. This type of work which includes clean-up of bodily fluids and heavy lifting can be dangerous. Injuries from lifting residents or from aggressive residents are common. In fact, the injury rate for CNAs is among the top five of any job



in the U.S. (U.S. Census Bureau, 2009). Despite uniformly low wages and benefits for CNAs (median pay \$11.54/hour), CNA jobs offer security and steady employment (Bureau of Labor Statistics, U.S. Department of Labor, 2012).

Like similar high stress, low wage jobs that offer little opportunity for advancement, CNA positions are primarily filled by women. More than half of all CNAs are minorities. A significant portion of CNAs is employed part-time, and these part-time workers (and sometimes full-time workers) often make up extra hours working as HHAs (Khatutsky et al., 2011). CNAs have lower rates of health insurance coverage than the average American worker and almost half are single (widowed, divorced or never-married) (Squillace et al., 2009).

## *2.2. Training and Certification*

Since 1987, federal regulations have mandated a mere 75 hours of initial training for CNAs. Sixteen hours of this initial training must be hands-on clinical training. Training opportunities are offered through specialized for-profit training schools, community colleges and, increasingly less commonly, in nursing homes. CNA training covers a broad range of topics, including interpersonal communication, infection control, residents' rights, basic nursing skills and personal care skills (ADLs) (PHI, 2005). To demonstrate that they have mastered the necessary skills, certification candidates must pass a state or federal approved competency evaluation. Individual states vary in how they implement the federal training and evaluation requirements, and 30 states require training beyond 75 hours. Federal and state training requirements were implemented as a result of a 1986 Institute of Medicine (IOM) report that claimed that CNAs were not adequately trained. Despite evidence to suggest that training has improved CNA

preparedness, more recent IOM reports continue to characterize CNA training as “insufficient” in terms of both number of hours and quality of content (Fineberg, 2008). However, despite this criticism, CNAs in general and immigrant CNAs in particular, report feeling well prepared in all aspects of training ( Khatutsky et al., 2010). There is no career development path for CNAs. At least twelve hours of continuing education are required to maintain certification but there are no opportunities for advancement through further CNA training. Indeed, CNA wages reflect the stagnancy of this profession. CNAs with 10 or more years of experience averaged just \$2 an hour more than those who began less than 1 year ago (Squillace et al., 2009). CNAs hoping to advance in the medical field may enter programs that train them to become Licensed Practical Nurses (LPN) or continue their education to become Registered Nurses (RN), but this is seen as a separate career track in terms of training requirements and certification (Redfoot & Houser, 2005).

### *2.3.Immigrant CNA Characteristics*

Although estimates vary, approximately 20% of CNAs in LTC are foreign-born (Squillace et al., 2009). Immigrant CNAs come to the U.S. from all over the world (U.S. Census Bureau, 2009); however, increasingly, immigrant CNAs are arriving from developing regions such as Africa (Arends-Kuenning, 2006). Compared to native-born CNAs, more immigrant CNAs work in states with large immigrant populations such as Texas, California, New York, Florida and Illinois. Overwhelmingly, immigrant CNAs can be found in metropolitan areas (Khatutsky et al., 2010).

Unlike foreign-trained nurses who are eligible to come to the U.S. for temporary employment under the 1989 *Immigration Nursing relief Act*, there are no provisions to

allow foreign-born direct care workers to immigrate to the U.S. either on a temporary or permanent basis (Redfoot & Houser, 2005). Most direct-care workers are “new Americans,” who have come to the U.S. through diversity visa lotteries, to join relatives or to seek political asylum. Following a pattern of chain migration, immigrant laborers tend to cluster together in distinctly ethnically identified professions (Lowell, 2012). Direct care workers are no exception. CNAs in different regions of the U.S. tend towards distinct ethnicities. For example, in California, one quarter of all CNAs are from the Philippines and another quarter is from Latin America (Ong, Rickles, Matthias, & Benjamin, 2002) while the majority of CNAs of Caribbean origin can be found in New York. In some cases, direct care workers of particular ethnicities are sought to care for elderly of the same ethnicity, as is the case for Russian care givers in New England and California. Generally, however, caregivers and residents are not matched by ethnicity.

There are some notable differences between immigrant and non-immigrant CNAs. Immigrant CNAs tend to be older and more educated than their native-born peers. Compared to native-born CNAs, twice as many immigrant CNAs had some post-secondary education. Indeed, 50% of CNAs from Africa and 70% of CNAs from the Philippines have at least some college education. Fifteen percent of immigrant CNAs have a college degree including a significant number who have nursing degrees from their home countries (Khatutsky et al., 2010). After immigrating to the U.S. these nurses may work as CNAs while preparing to take the U.S. nurse licensing exam. If they find language difficulties and licensing exams too big an obstacle, these “decredentialed” nurses often continue to work as direct care workers in the U.S (George, 2005; Redfoot &

Houser, 2005), but this option represents significant downward occupational mobility (Solari, 2006).

Several patterns that hold true for the general U.S. labor market do not hold true for CNAs. For one thing, immigrant CNAs tend to fare better than their native-born peers in terms of wages and benefits (Acosta & De la Cruz, 2011; Khatutsky et al., 2010). Further, since the vast majority of immigrant CNAs are people of color and immigrant CNAs are better educated than their native-born counterparts, whites do not make the highest wages in this profession. In fact, Asian women and black male immigrants have the highest wages among CNAs (although benefits are slightly lower for this latter group) (Price-Glynn & Rakovski, 2012). Higher wages for immigrant CNAs may be related either to higher levels of education or to geographic distribution since Asians and non-citizens tend to be located in metropolitan areas where wages are generally higher (Khatutsky et al., 2010; Price-Glynn & Rakovski, 2012). Additionally, while the vast majority of CNAs (both immigrant and native-born) are women, there are significantly more foreign-born males working as CNAs (14% versus 10% of non-immigrants). Unlike most female dominated professions, male CNAs do not seem to have any significant job-related advantages. Race, ethnicity and citizenship were much more influential than gender in determining factors related to career advancement (Price-Glynn & Rakovski, 2012).

### **3. Immigrant Status and Provision of Care**

#### *3.1. Language and Communication*

Redfoot and Houser (2005) among others have identified language proficiency as an important measure of quality because effective communication is essential to good care. CNAs must be able to communicate effectively with residents, co-workers, supervisors and residents' family members (Direct Care Alliance, 2013). CNA reports of changes in a resident's health, functioning and behavior are a critical link in the care chain. Moreover, in nursing homes, where residents have severe cognitive and physical deficits, CNAs are responsible for almost every aspect of the residents' daily lives and often one of their only sources of socialization. Thus, for these residents, communication with CNAs has a huge impact on their overall well-being and quality of life. Language and communication concerns are frequently cited as areas for increased training, and these concerns are not unsupported. According to data from the NNAS, 51% of immigrant CNAs reported communication difficulties (Khatutsky et al., 2010).

English language fluency is the most obvious source of communication difficulties for most immigrants. English language requirements for CNA certification are minimal. Candidates for certification are required to take the certification exam in English (but may ask for it to be administered orally, bypassing written literacy). In addition, a program administrator, rarely trained in language evaluation, must verify that candidates can communicate in English. There is no standard for this verification process. Basic English language ability is a concern for more than 50% of foreign-born CNAs; in the 2000 Census, 12% of CNAs in LTC settings reported that they could not speak English at all or could not speak it very well (Khatutsky et al., 2011; Lowell, 2012; Martin, Lowell, Gzodziak, Bump, & Breeding, 2009). Even for English speaking immigrant CNAs, accents and vocabulary from various forms of world English can be an

obstacle to communication (Kingma, 2007). Martin, et al noted that speaking ability including accent is often the cause of perceptions of poor care (Martin et al, 2009). Indeed, the immigrants in Ryosho's (2011) small-scale study were targeted for complaints based on their accents.

Communication can also be hampered when CNAs have trouble understanding residents either because of their own English language deficiencies or because the residents speak languages other than English. The CNAs in Fisher and Wallhagan's (2008) study found this mutual unintelligibility to be time consuming and frustrating. For this reason, it's not surprising these CNAs also paid more attention to residents who spoke the same language. Nursing homes, which at one time were populated mainly with white residents, are increasingly less homogenous. The ever increasing diversity of residents may, in part, explain the unexpectedly large percentage of native-born CNAs who also report difficulty communicating (Squillace et al., 2009).

Evidence suggests that language fluency is not the only obstacle to effective cross-cultural communication. Allensworth-Davies, et al (2007) found this to be true, noting that non-verbal aspects of communication have a huge impact on the communication process. Unfortunately, immigrant CNAs may not always attend to the affective aspects of communication. Chung found that immigrant CNAs, responding to pressure from supervisors and family members, may prioritize the outcomes of care, such as keeping residents clean, over the process of care which includes aspects of good communication such as affection, patience and respect (Chung, 2013).

### *3.2. Cultural Attitudes and Beliefs*

Culturally rooted attitudes and beliefs may play a role in guiding CNA caregiving behavior. For example, beliefs about what constitutes good care or attitudes about aging, can influence when and how care is rendered (Office of Minority Health, 2001).

Anderson, et al (2005) described how CNAs' "mental models," for example of dementia or depression, can be a useful guide to care actions by providing ready interpretation of residents' behavior. However, they also cautioned that, unchallenged, mental models may lead to poorer care. Since these attitudes and beliefs may be at odds with clinical understanding, significant signs and symptoms may be ignored or misinterpreted. For example, CNAs from cultures that stigmatize dementia may ignore or obscure symptoms that should be addressed (Davis & Pope, 2010; Davis & Smith, 2013). Attitudes toward the elderly may have a more subtle impact on provision of care. In her examination of three black cultural groups, Robinson (1994) found that attitudes toward the elderly varied by group and these attitudes were culturally derived.

Caregiving relationships also exhibit the influence of culture. Several studies have found that CNAs often orient themselves to their work using the metaphor of family relationships (Berdes & Eckert, 2007; Fisher & Wallhagen, 2008). To a greater or lesser degree, residents may be seen as "fictive kin." This is particularly true for those who have previous experience caring for family members, those who miss far away family members or those who were raised to understand caregiving within the context of family. The fictive kinship framework serves as a source of knowledge and skills as CNAs draw on their personal and cultural understanding of caregiving (C. Berdes & Eckert, 2007).

Fisher and Wallhagan observed that the workplace environment had an impact on whether CNAs employed the fictive kinship framework or its alternatives. They found that viewing some residents as family members, as opposed to depersonalized commodities, can motivate CNAs to provide better care to all residents (2008). For many CNAs, the emotional ties that fuel affective care underpin the provision of instrumental care which is often the unpleasant “dirty work” (C. Berdes & Eckert, 2007).

CNAs value the bonding and authentic relationships they have with residents, and often cite these as aspects of the job that provide the greatest job satisfaction (Dodson & Zincavage, 2007). Supervisors, too, recognize that the family metaphor can produce positive care outcomes, and this is often seen as the best model of care for elderly residents (Dodson & Zincavage, 2007). Supervisors may encourage the family framework because they find it produces morally obligated and emotionally devoted workers (Chung, 2010; Dodson & Zincavage, 2007). For example, it has been reported that some supervisors use CNAs’ emotional attachment to coerce them into working longer hours or performing extra duties. However, Dodson and Zincavage found that the emotional work of CNAs may not be reciprocated or supported. While supervisors encourage “family relationships” in order to elicit better workers, they may label grief over the death of a “family member” as unprofessional (Berdes & Eckert, 2007; Dodson & Zincavage, 2007). Thus, frameworks that foster relationships that provide real value to immigrant CNAs may also be used to exploit them.

Culturally derived notions of “good care” significantly affected CNAs’ relationships with resident’s family members. Ideally, CNAs and family work together as a care giving team, but there is often animosity. A number of studies found that CNAs



from cultures that routinely care for the elderly at home express shock, even anger, at the way elderly are institutionalized (Berdes & Eckert, 2001; Foner, 1994; Ryosho, 2011). The CNAs interpreted this unfamiliar mode of care as evidence abandonment by the residents' families. Thus, it is difficult for the CNAs to see the family members as part of the care team.

### *3.3. Perceptions of Racism and Discrimination*

The racial and ethnic context of the larger society is often replicated within nursing homes, and there is ample evidence that minority CNAs experience racism on the job and that immigrant CNAs additionally perceive negative attitudes related to their immigrant status. Analysis of the NNAS revealed that immigrant CNAs are three times more likely than non-immigrants to report being discriminated against at work due to race or ethnicity (G. Khatutsky et al., 2010). Twenty years ago, Robinson observed that 1/3 of residents held racist attitudes (1994). More recently, Ryosho found that perceived racism creates social distance between CNAs and resident, and further, that CNAs avoid residents who have exhibited racist attitudes towards them (2011). Berdes and Eckert described CNAs' nuanced understandings of the origins of racist attitudes. CNAs had a difficult time continuing to interact with residents who exhibited malignant racism, which is intentionally malicious language and behavior. In the case of anachronistic racism, which is a product of by-gone societal norms, CNAs were able to rationalize residents' behavior and continue providing full levels of care (2001).

Evidence concerning negative attitudes of residents' family members is mixed. While the NNAS showed some evidence of discrimination from family members, other studies suggest that CNAs are not significantly affected by family members' attitudes

(Berdes & Eckert, 2001; G. Khatutsky et al., 2010; Ryosho, 2011). In the nursing home environment, workers are not surprised to find some forms of racism, and they are often able to overlook racist comments and attitudes in order to do their jobs. However, even when CNAs are able to see past it, racism adds a layer of difficulty to immigrant CNAs' provision of care (Dodson & Zincavage, 2007).

Coworker interactions seem to be influenced by racism as well. In Ryosho's study, white, American CNAs did not perceive racism to be a problem, but immigrants and minorities disagreed (Ryosho, 2011). Other studies found that prejudice between groups was mutual. Several ethnographic studies have described how CNAs tend to form sub-groups based on ethnicity (Browne, Braun, & Arnsberger, 2006; Foner, 1994). These divisions can hamper communication and cooperation among co-workers. For some, there was no clear distinction between racism and xenophobia as immigrant CNAs experienced additional negative attitudes from native-born CNAs of the same race (Berdes & Eckert, 2001; Ryosho, 2011).

Racism also affects interactions between CNAs and their supervisors. Older studies found evidence of significant discrimination from white administrators who prioritized residents' needs by ignoring residents' abusive and racist behavior and assigning a greater workload to immigrants and minorities (Foner, 1994). More recently Hurtado et al. also found that immigrant CNAs have a greater level of job strain, suggesting that these patterns may still persist (2012). However, data from the NNAS show that immigrants and non-immigrants reported similar levels of respect from supervisors. In fact, Allensworth-Davies et al suggest that supervisors can have a huge impact on overall organizational culture through their expectations of how racism is dealt

with within the organization. An organizational climate that discourages racism and discrimination was shown to be strongest predictor of job satisfaction (2007).

### *3.4 Turnover and satisfaction*

Turnover rates for CNAs in LTC facilities range from 25% to 100% annually. This is costly for employers who have to regularly recruit and train new employees (American Health Care Association, 2008). Turn-over has also been found to have a significant impact on provision of care. A meta-analysis found that lower CNA turnover rates were associated with improved quality indicators including reduced use of physical restraints, catheters and psychotropic drugs and fewer contractures and pressure ulcers (Bostick et al, 2006). Frequent turnover of CNAs, where residents are constantly faced with establishing new relationships, is likely to negatively affect quality of care when CNAs don't have time to learn needs and preferences of individual residents (McGilton & Boscart, 2007). Finally, facilities that are understaffed or where staff are undertrained increase worker stress. Because of its recognized impact on direct-care economics and quality of care, turnover in the direct care workforce has been the focus of much scrutiny (Bowers, Esmond, & Jacobson, 2003; Brannon et al , 2002; Castle et al, 2007; Collier & Harrington, 2008; Decker et al., 2003).

Immigrant CNAs, as a rapidly growing sector of this workforce, have not escaped this scrutiny. Khatutsky's analysis of the NNAS showed that fewer immigrants than non-immigrants reported being in their current job less than one year which indicates that immigrants may stay at their jobs longer than non-immigrants (Khatutsky et al., 2010). However, 61% of immigrant CNAs said they intended to leave within one year (Sloane, Williams, & Zimmerman, 2010). At least one study found no relationship between CNA

intent to leave and their actual employment path, so intent to leave does not necessarily lead to turn over. On the other hand, neither intent to stay nor satisfaction were significantly related to staying on the job.

High rates of intent to leave may hint at dissatisfaction with some aspect of employment. However, immigrant CNAs report being very satisfied in general with their jobs and careers (Rakovski & Price-Glynn, 2010). These high levels of satisfaction suggest that other factors played a role in immigrant CNA turnover (Sloane et al., 2010; Squillace et al., 2009). Dill et al, found that with CNAs, as vulnerable low-wage workers, contingencies (such as being the family bread winner or a single mother) played a much larger role in employment path than did either intent or satisfaction. These findings indicate that CNAs may like their jobs and want to keep them but that external pressures drive high rates of turnover (2013). For immigrants in particular, one possibility may be that better educated immigrants leave their jobs as they move into more professional positions (foreign educated nurses passing their U.S. credentialing exams, for example) (Hussein & Manthorpe, 2005; Priester & Reinardy, 2003). Alternately, immigrants may be prone to higher levels of care giver burn out, or frequent moves and job changes may be part and parcel of the immigrant experience (Sloane et al., 2010).

#### **4. Conclusion:**

Review of the literature highlights the influence of immigrant status on CNAs' provision of care in LTC settings. Factors such as language and communication, culturally based attitudes and beliefs, perceptions of racism as well as turnover and satisfaction are all related to immigrant status and can affect quality of care. Given increasing reliance on immigrants in the direct care labor force, it is important to consider

how policies, training and work environment can influence immigrant CNAs' ongoing ability to provide care. It is clear that developing the immigrant CNA workforce will require restructuring of some aspects of CNA training and employment. If immigrants are to give good care to elderly Americans, in return they must be given adequate training, ongoing support and workplaces free of discrimination. Their desire to provide good care must not be used as a vehicle of exploitation and their labor should be reciprocated with adequate wages and career paths that support their growth and competence. This arrangement of economic convenience has the potential to be mutually beneficial to the elderly and the immigrants who care for them. However, this relationship may be doomed if it is not reciprocal.

It is important to keep in mind that the circumstances of different immigrant groups can vary considerably in terms of their cultural and linguistic heritage, reasons for departure and social and economic resources. Immigrant CNAs are not a homogenous group. Indeed, gender, race, ethnicity and immigrant status are all aspects of CNA identity that can contribute to care processes and outcomes. At any given time and in any given context, one identity may be more salient than another (Landry, 2007). Therefore, future examinations of immigrant CNAs should not forget to consider their multifaceted identities and location within a complex society.

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Table 1: Articles selected for review

Author (Year)	Purpose	Setting	Sample	Immigrants in Sample	Instrument	Method/Analysis	Key Findings	Thematic Contribution
Robinson, A. D. (1994).	To describe and compare attitudes toward the elderly among NAs of three different cultural groups	5 public and private nursing homes in NYC	n=246	Undefined; (77 African American; 79 Haitian; 90 Caribbean)	Some items from the Perceptions of the Elderly Scale	Descriptive statistics; Cross-tabs by group; factor analysis	Attitudes were generally positive but differed across cultural groups	Cultural attitudes and beliefs
Foner, N. (1994).	To analyze N.A.s treatment of and response to patients	200 bed nursing home in NYC	n=95	Undefined (all black and Hispanic; mostly immigrants from Caribbean and Central America)	Interviews	Qualitative analysis	Most N.As are neither entirely cruel nor entirely compassionate in their treatment of patients	Racism; cultural beliefs
Berdes & Eckert (2001)	This study aimed to explore the effects of racial and ethnic differences between residents and N.As	4 nursing homes in Illinois	n=60 (30 residents+30 N.As)	Foreign-born	Interviews	Qualitative analysis	One-third of residents had racist attitudes; three-quarters of N.As had experienced racism; foreign-born N.As were more likely to experience racism.	Racism and discrimination

Redfoot & Houser (2005).	To examine how immigrant workforce affects quality of care in LTC setting (part of a much longer report)	Secondary analysis of multiple data sources from developed counties	Multiple data sources	Foreign-born (citizens and non-citizens) 10 Latina women, 2 South Asian women, 1 African American woman, 3 Hispanic men, and 1 Armenian man	Various (including American Community Survey)	Review or literature and descriptive analysis	There is a need for policies and programs targeting immigrant care workers in developed countries (U.S.)	Background; language and communication;
Carpiac-Claver & Levy-Storms (2007)	To describe communication patterns of N.A.s	2 skilled nursing facilities	n=17		Video-taped interactions at meal-time	Qualitative analysis	Notable patterns of affective communication; communication can be repetitive and shallow and includes some "elderspeak"	Language and communication
Allensworth-Davies, et al (2007).	To examine perceptions of organizational cultural competence by country of origin and racio-ethnicity	4 New England nursing homes	n=135	Foreign-born (citizens and non-citizens)	Measures of organizational cultural competence and job satisfaction	ANOVA; linear regression	Perception of organizational cultural competence (which differs by race, not by country of origin) increases job satisfaction.	Racism and discrimination

Dodson & Zircavage (2007).	To examine the intersection of gender, class and race in LTC facilities	18 LTC facilities in Massachusetts	n=105 N.As in addition to administrators, LPNs and other staff	Undefined: large proportion of immigrants	Focus groups, interviews, survey data	Qualitative analysis	The family metaphor of care fosters good caregiving but can also lead to exploitation	Racism and discrimination; cultural attitudes and beliefs
Berdes & Eckert (2007)	To explore the use of family metaphors and describe affective care in nursing homes	four nursing homes	n=30 (African-Americans and immigrants)	undefined (from Africa, South Asia or Caribbean)	Interviews	Domain analysis of interview transcripts	N.As use the metaphor of family to describe affective care; immigrants, in particular, were disturbed by "uncaring" residents' family members	Cultural attitudes and beliefs
Fisher & Wallhagen (2008).	To identify N.As perspectives of nursing home residents and how this translates into care practices	Three nursing homes in northern California	n=27 (24 immigrants)	Undefined (immigrants from Asia, Mexico, South Pacific and Africa)	Interviews	Grounded theory	N.As views of residents (as fictive kin, commodity or autonomous person) impacted care.	Cultural attitudes and beliefs

Khatutsky, Wiener & Anderson (2010).	To analyze the National Nursing Assistant Survey (2004) to examine the differences between immigrant and non-immigrant N.As	582 nursing facilities around the U.S.	n=2881 (401 immigrants)	Foreign-born (citizens and non-citizens)	Survey	Chi-square and mean tests	There are significant differences in wages, education, language, discrimination, type of facility between immigrants and non-immigrants	Language and communication; racism and discrimination; turn-over
Rakovski & Price-Glynn (2010).	From the NNAS to use intersectional analysis to examine the role of work, environment and identity in job satisfaction for N.As	582 nursing facilities around the U.S.	n=2881 (401 immigrants)	Non-citizens	Survey	Composite scores; ANOVA	High job satisfaction among N.As (particularly immigrants; race and citizenship played a stronger role than gender in worker satisfaction	Job satisfaction and turn-over
Chung, G. (2010).	Examine beliefs and assumptions of N.As in nursing homes	Skilled nursing facilities in Los Angeles	n=21	Undefined (Central and South America)	Interviews	Grounded theory	N.As see residents as dependent, like babies, think of them as family; ideas of good care.	Cultural attitudes and beliefs

Sloane, Williams & Zimmerman (2010).	To determine whether immigrant status is associated with turnover	582 nursing facilities around the U.S.	n=2881 (401 immigrants)	Foreign-born (citizens and non-citizens)	Survey	Bivariate comparison; logistic regressions	Immigrants reported less respect from residents and family; more likely to intend to leave within one year	Job satisfaction and turn-over
Ryosho, N. (2011).	To examine perceived racism and cultural conflicts among N.As	A large nursing facility in Virginia	n=8	Foreign-born	Interviews	Qualitative analysis	N.As all experienced racism and had different ways of dealing with it	Racism and discrimination
Hurtado, et al. (2012).	To examine racial and ethnic differences in job strain	Four nursing homes	n=155	Foreign-born (96% immigrant)	Interviews and questionnaire	Bivariate comparison; logistic regressions	Black immigrant workers were 2.9 times more likely to report job strain than white workers	Job satisfaction and turn-over
Price-Glynn & Rakovski (2012).	To look at organizational factors to see if men have an advantage in this female profession	582 nursing facilities around the U.S.	n=2881 (401 immigrants)	Non-citizens	Survey	Bivariate and multivariate analysis	Factors other than gender (race, citizenship) were more important in determining advantages	Job satisfaction and turn-over



Davis & Smith(2013).	To examine three cultural factors that influence the work of immigrant N.As	Training program for N.A.s	n=214	Foreign born	Observation		Factors related to immigrant N.As culture and language. Intergenerational factors, culturally derived attitudes	Language and communication; culturally based attitudes and beliefs
Chung, G. (2013).	To explore how N.As conceptualize good care	Skilled nursing facilities in Los Angeles	n=21	Undefined	Interviews	Qualitative analysis	N.As focused on outcomes of care over process of care	Language and communication

**Communication patterns of immigrant Certified Nursing Assistants in institutional long-term care facilities**

## **Abstract**

**Background:** Certified Nursing Assistants (CNAs) perform the majority of hands-on care tasks in nursing homes, and 20% of the CNA workforce are immigrants. The work of the CNA relies on both instrumental and socio-emotional communication skills.

**Purpose:** The purpose of this study was to examine the communication patterns of immigrant CNAs in nursing homes.

**Design and Methods:** A convenience sample of 32 immigrant CNAs provided brief responses to 9 care challenge videos. The “talk to the video” responses were coded using the Roter Interaction Analysis System (RIAS) CNA experts rated the responses for quality of care provided and a linguistic expert rated the CNAs’ spoken English proficiency. Bivariate correlations were used to examine the relationships between communication categories, ratings of quality and language proficiency.

**Results:** Study participants attended almost equally to instrumental and socio-emotional communication. Instrumental communication comprised slightly more than half of all CNA talk (54.4%) while socio-emotional communication comprised 45.5% of all CNA talk. The relationship between quality and type of communication differed across the nine care challenges. Similarly, communication behaviors associated with language proficiency differed for the nine care challenges.

**Implications:** This study adds to the literature regarding immigrant CNA communication and quality.

## **Introduction**

By 2050, there may be as many 27 million elderly Americans living in Long-term care facilities such as nursing homes (Kaye, Harrington, & LaPlante, 2010). These facilities are designed to provide assistance in daily living tasks, such as eating, dressing and bathing for as well as on-going medical care for acute and chronic conditions and Certified Nursing Assistants (CNAs) perform up to 80% of this care (Harmuth & Dyson, 2005; Waxman, Carner, & Berkenstock, 1984). Like many other high demand-low wage industries, direct care positions are increasingly being filled by immigrants, particularly women. Although estimates vary, approximately 20% of CNAs working in long-term care facilities are foreign-born (Squillace et al., 2009). While these immigrants come to the U.S. from all over the world (U.S. Census Bureau, 2009), they are increasingly from developing regions such as those in Africa (Arends-Kuenning, 2006). Immigrant CNAs are diverse in terms of their linguistic backgrounds, English language skills and educational backgrounds (Anderson et al., 2005; Chung, 2010; Khatutsky, Wiener, & Anderson, 2010). There is concern that these factors may contribute to communication difficulties that interfere with resident care.

Communication is critically important to nursing home residents' overall wellbeing and quality of life. CNAs must be able to communicate effectively with their supervisors and co-workers as well as residents and residents' family members (Direct Care Alliance, 2013). CNA reports of changes in a resident's health, functioning and behavior are a critical link in the care chain. CNAs are not only responsible for the hands-on tasks of care giving but are also often residents' primary source of social

contact. Thus, CNA care requires skill in both instrumental (task oriented) and socio-emotional communication.

The few studies that have focused on CNA communication point to a need to improve CNA communication. CNAs, themselves, recognize a need to enhance their communication skills (Ripich, Wykle, & Niles, 1995). Some studies have shown that some CNA care is characterized by lack of communication. Qualitative observational studies of CNA's work behavior in nursing homes revealed that a mere 11.8% of CNA work time included any communicative engagement with residents (Burgio et al., 1990). Neutral interactions (with neither positive nor negative affect) appear to be the norm (Burgio et al., 1990; Carstensen, Fisher, & Malloy, 1995). Additionally, CNAs do not initiate much communication with residents during care (Nussbaum, 1993; Simmons, Babineau, Garcia, & Schnelle, 2002). More recent studies of CNA communication with residents have found that while much CNA speak is instrumental and repetitive, there are notable patterns of socio-emotional CNA communication (Carpiac-Claver & Levy-Storms, 2007; Medvene & Lann-Wolcott, 2010; Williams, Ilten, & Bower, 2005).

Positive CNA-resident communication has been linked to improved resident outcomes. For example, Roth, Stevens, Burgio, and Burgio (2002) found that socio-emotional communication initiated by CNAs decreased agitated behavior in residents. A number of intervention studies which were intended to enhance therapeutic communication particularly with residents diagnosed with dementia (Levy-Storms, 2008) have demonstrated improvements in outcomes and ratings by improving CNA communicative efficacy (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004; McGilton & Boscart, 2007; Sloane et al., 2004; Williams et al., 2005).

None of these studies have focused on immigrant status or have accounted for cultural and linguistic factors that affect communication.

The present study was designed to explore the following research questions:

1. How do immigrant CNAs respond to a variety of standardized care challenges?
2. Is immigrant CNA communication related to language proficiency and quality of care ratings?
3. How do immigrant sociocultural and socio-demographic background factors affect verbal and nonverbal communication?

## **Study Design and Methods**

### ***Sample characteristics***

A convenience sample of 35 immigrant CNAs was enrolled in the study. CNAs were eligible to participate if 1) they had been born outside of the United States and 2) were currently working as a CNA. CNAs were excluded if they refused informed consent which required their willingness to be videotaped. Data was collected in a private room away from other activities. Overall, 35 (100%) of the subjects identified as Black/African American and 27 were women (77%). The average age of the subjects was 32 years old. The majority, 21 of the subjects, had lived in the United States for less than 3 years (60%) and most were permanent residents of the United States (77%). About half of the subjects were single (55%) and all but one had completed high school (97%). Overall demographic data for the 35 CNAs are presented in **Table 2**. The study was reviewed and

approved by the Johns Hopkins School of Public Health Institutional Review Board as well as the Prince Georges Community College Institutional Review Board.

### ***Video creation***

The intent of the standardized care challenges was to simulate situations that would require communication tasks similar to those encountered in the day to day work of a CNA in a nursing home facility. These care challenges were developed based on observations of CNAs interacting with residents in nursing home settings, review of the literature, informal conversations with CNAs and discussions with CNA instructors. Using the information gathered from these sources, 12 care challenges were developed, three involving a co-worker, six depicting a 78 year-old, female, nursing home resident alone in her room and two with the resident's visiting family member. The care challenges included scenes of the resident in pain, unable to speak, refusing a meal and wanting to chat (see **table 1** for full description). The primary function of the co-worker scenarios was to frame the resident care challenges and offer initial practice with using the computer interface and responding to the videos. The co-worker scenarios were not included in the analysis.

Actors portraying the coworker, the resident and the family member were given scripts and coached for accuracy of performance. They were then digitally video recorded acting out the scripted care challenges. Each care challenge was edited into a short (~10 second) vignette. The vignettes were viewed by a panel of CNA instructors who confirmed their appropriateness for the purposes of the study. The instructors also gave input on the types of CNA responses that could be expected as well as appropriate measures for the quality of care outcome. The completed care challenge videos were

loaded into a computer program and paired with introductory text. The resident dialogue and introductory text for each of the care challenges used in analysis are displayed in **table 1**.

### ***Data Collection***

At the start of their participation in the study, CNAs gave informed consent and were told that the goal of the study was to learn how immigrant CNAs communicate with residents. Then CNA subjects completed a survey that included questions about demographic information (age, race, and county of origin), education and training, languages spoken, job history, experience caring for old people, self-efficacy and attitudes toward old people. The investigator then oriented the subject on how to view and respond to the care challenge videos by showing the first video of the co-worker and allowing the CNA to respond as if speaking directly back to the coworker. The investigator, after making sure the subject knew how to advance through the program, turned on the video camera and left the room. The investigator was available outside of the room in case subjects had any additional questions during data collection. Finally, subjects completed a follow-up questionnaire that asked about their experience viewing and responding to the care challenges.

Once data had been collected from all subjects, their recorded responses were compiled into response sets comprised of a single CNA's responses to all of the care challenges. The 35 subjects produced 32 complete response sets; there was one technical failure in which, the camera did not record, one CNA withdrew from the study because of time constraints, and one CNA did not talk at all during the recording.

*RIAS*



The 32 response sets were coded by trained raters using the Roter Interaction Analysis System (RIAS). The RIAS has also been widely used in a variety of medical contexts, including primary care, oncology, geriatrics and nursing and is a well-validated communication measurement instrument. The coding unit of analysis is a complete thought and each thought is assigned to a single mutually exclusive code category. The length of the coding unit can vary from a single sound (for example, “Uhhhh.”) to a full sentence conveying (for example, “I am going to be the one taking care of you from now on.”).

In the present study, coded communication was reduced from 40 categories to ten code composites including: 1) data gathering about biomedical topics; 2) data gathering about psychosocial topics; 3) patient education and counseling about biomedical topics; 4) patient education and counseling about psychosocial topics; 5) positive exchange, 6) negative exchange; 7) emotional talk; 8) social chit chat; 8) facilitation; 9) partnership building and activation; and 10) orientation and instruction. These coding categories were grouped with relation to either instrumental or socio-emotional communication tasks. Examples of immigrant CNAs’ RIAS composite statements can be found in **Table 3**.

#### *Rating of CNA Quality of Care*

CNA quality of care was assessed by a CNA instructor with 15 years’ experience providing clinical on the job training with CNAs in nursing home settings. The rater was asked to consider several dimensions of quality including address of medical and emotional concerns, use of appropriate language and proper demeanor. The rater assigned an overall quality rating to each CNA’s performance, with 10 being the highest quality of

care and 1 being the lowest. Reliability of the expert ratings was assessed by double-coding of 12 of the response sets by a second qualified rater. Inter-coder reliability was high (Pearson correlation = .89). The overall ratings of CNA quality of care ranged from 1 to 10 with a mean (sd) of 4.6 (2.38).

### *Spoken English Proficiency*

The spoken English of each subject was rated on four sub-scales: Structure, word choice, rhythm and accentedness. Each component was assessed using a 5-point Likert-type scale. Subjects received low ratings for areas of speech that interfered with comprehensibility. The highest rating in each area indicated native-like facility. The scores of the subscale were combined for an overall rating of spoken English proficiency. The internal consistency of the spoken English rating scale was acceptable, as reflected in a Cronbach's alpha of .80. Ratings were conducted by a linguistic expert with over ten years' experience in applied linguistics. Intracoder reliability of the measure was established by double coding of 10 videotapes by the same rater (kappa = .92, 95% CI = .69-.98). The overall ratings of spoken English ranged from 7 to 17.5 with a mean (sd) of 12.19 (2.63).

### *Validity*

Validity of the CNA responses was assessed in several ways. Quantitative ratings of verisimilitude (realism) were provided both by CNAs in the post-questionnaire and by the expert raters. Additionally, qualitative ratings of verisimilitude were provided by a panel of CNA instructors. All measures of verisimilitude indicated that CNA responses to the video vignettes were highly similar to what would be observed in an actual nursing home setting.

## Results

The mean number of CNA statements was 77 (sd=30) per response set (combined responses to all nine care challenges). The mean length of the response sets was 219.44 (sd=85.85) seconds (range 83 to 403 seconds). CNA gender, age and experience had no significant impact on the length of the response sets.

**Table 4** summarizes the amount of CNA talk devoted to instrumental and socio-emotional communication. On average, slightly more than half (54.4%) of CNA talk was devoted to instrumental behaviors; 16.6% involved procedural talk and 11% involved facilitation and activation statements. Socio-emotional behaviors comprised 45.5% of all CNA talk; 24% of all talk was devoted to emotional talk and an additional 12.1% was devoted to positive rapport building.

As is evident from **Table 5**, the relationship between communication behaviors and quality ratings differ across care challenges, however, biomedical questions were more consistently related to quality ratings than other categories. In three scenarios questions were positively associated with quality (pain, updating a family member and loneliness), but negatively correlated in the scenario in which the resident is complaining of being cold. Social talk was positively related to quality in three scenarios (updating a family member, loneliness and confusion). Interestingly, the only quality correlate of emotional talk was negative (family status update).

Correlations were also calculated for spoken English proficiency and RIAS composite categories (**table 6**). It appears that language proficiency was associated with more biomedical counseling across three scenarios (depression, feeling cold and change of plans) other significant correlates appear only in relation to single scenarios.

Finally, CNA background characteristics (age, gender, years in the U.S., years of experience working as a CNA and years of education) were correlated with CNAs' communication behaviors. The only significant correlation was a negative correlation between education and instrumental talk.

## **Discussion**

Study results suggest that immigrant CNAs attended nearly equally to instrumental and socio-emotional communication with the largest proportion of their communication devoted to emotional rapport building and the provision of orientation and directions. This finding is in contrast to earlier reports that CNAs engage in socio-emotional communication relatively infrequently (Carpiac-Claver & Levy-Storms, 2007; Williams et al., 2005). Unlike the CNAs in the present study, the CNAs in William's study were primarily task focused.

Secondly, this study provides insight into what constitutes quality CNA care. Ratings of care quality were differentially associated with communication across the care challenges presented in the study. This suggests that the criteria for quality of care differ depending on the context. Indeed, it is not hard to imagine that using social conversation might put a resident at ease in some situations but would not always be appropriate when addressing a resident in medical distress. Likewise, asking bio-medical questions would be appropriate in a situation where the resident was in pain but not appropriate when they were complaining of the cold.

Previous studies have demonstrated that socio-emotional behavior can significantly impact patient outcomes. Based on this finding, a number of interventions have sought to increase the effectiveness of socio-emotional CNA communication. In the

present study, social and psychosocial exchange were associated with quality of care ratings. However, while both instrumental and socio-emotional communication are important to CNA care, it is even more important for CNAs to respond appropriately to residents. For example, when responding to a resident experiencing a medical crisis, it is not enough for the CNA to express empathy or concern. The CNA must also know how to address the resident's medical needs or when to call for help. Conversely, addressing physical needs may not be adequate if the resident's needs are also psychosocial in nature.

Third, this study explored the relationship between English proficiency and communication behaviors. CNAs who are more proficient in English appear more confident in employing certain types of communication behaviors; for example, biomedical counseling was associated with greater English proficiency in three challenges. Biomedical talk may require more sophisticated vocabulary and may therefore be easier for CNAs with greater proficiency in English. An alternative explanation is that CNAs with more education, who also have greater English proficiency, may have more knowledge of and interest in biomedical topics.

Finally, this study introduces a novel method for exploring CNAs' communication in standardized care cases. The rich description of CNA communication behaviors supports the usefulness of this type of data gathering in CNA communication research. The videos of care challenges were developed with attention to authenticity and relevance to clinical applications. Both CNAs and nursing assistant certification instructors rated the scenarios high in realism. The instructors indicated that the use of care challenge videos could prove useful in CNA communication skills training. Use of

interactive video response for data collection allows for the examination of CNA communication patterns without the difficulties and disadvantages of disrupting resident-care routines. Additionally, this mode of data collection eliminates the confounding effects of different residents' traits on CNA communication behaviors.

There were a number of limitations to the study. The study used a small, convenience sample of African immigrants working in nursing home facilities in metropolitan Washington DC. The small number of participants and the homogeneity of the group limit the generalizability of the findings. Additionally, while both the care challenge videos and the CNAs' responses received high ratings of verisimilitude, responding to a video cannot be expected to be exactly the same as responding to a real person. Because analysis included no resident dialogue in the one-way interactions, the dynamic effect of resident contribution to communication was not examined. For this reason, some aspects of communication such as turn taking and interrupting, could not be explored. Further, an in person interaction would provide the opportunity for additional non-verbal communication cues (such as eye contact and touch).

## **Conclusion**

This small study demonstrates that the elements of high quality CNA communication differ according to the care challenge presented. Different communication behaviors are required in response to different care challenges. Depending on the caregiving goal, quality may be impacted more by appropriate content of the CNA response than by type of communication. Because CNAs are responsible for resident care in a range of contexts (from medical emergency to feeding to social interaction) the ability of CNAs to be flexible in their responses may be the key to quality

care. These findings highlight the importance of training CNAs to respond appropriately to a variety of care challenges. Rather than training CNAs in any particular type of communication behavior, training should enable CNAs adapt their responses to a wide variety of care contexts.

Results also highlight the importance of spoken English proficiency. A minimal level of spoken English proficiency is necessary for basic communication. Ongoing English for specific purposes training (focusing specifically on CNAs particular communicative context) will increase language proficiency for immigrant CNAs. Context specific language training may also improve quality by increasing the range of communication behaviors immigrant CNAs can employ with ease.

Questions remain about the factors of immigrant CNA communication that influence caregiving quality. Further research should focus on how characteristics associated with different immigrant groups affect provision of care as well as comparisons between immigrant and non-immigrant CNAs' patterns of communication and quality. Additionally, factors related to residents, such as resident characteristics, contributions to communication and outcomes should be considered.

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<b>Table 1 Text introductions and scripts of Care Challenges</b>		
<b>Scenario</b>	<b>Introductory Text</b>	<b>Script</b>
<b>Introductions</b>	You are new to the floor. Check in on the resident in Room 223. Her name is Miss Mattie. Speak to the camera as if you are talking directly to the resident.	Resident: Good morning. I haven't seen you here before. Are you going to be the one to take care of me from now on?
<b>Depressed</b>	Miss Mattie usually looks forward to meals in the dining room. Today she has not come down for any meals. Your supervisor has asked you to take Miss Mattie to the dining room.	Resident: I'm just not hungry today. I don't want to go downstairs and listen to all those people chattering and talk too much. My daughter was supposed to come today but she couldn't come. One of the kids was sick and just with a running nose too. I guess nobody wants to see an old lady anyway. No. I'm not hungry. I don't want to go downstairs. I don't want to be around all those chattering people. I want to stay right here.
<b>Feeling Cold</b>	Miss Mattie can't seem to get comfortable. She is calling for assistance.	Resident: Oh there you are. I called for someone and nobody came. It's awfully cold. It's been so cold and I got an extra blanket and it didn't help at all. I'm still cold. Aren't you cold? It's not right. It's so cold in here. It's not right to turn down the heat and forget about folks.
<b>Pain</b>	Miss Mattie has been tired today. She has been in bed since after breakfast. You are checking in on her.	Resident: Oh there you are. Something's wrong. I'm not well. I called for someone. Could you get the nurse? I have pain here. I need some help. Something's not right.
<b>Change of routine</b>	It is time to help Miss Mattie with her bath. She usually likes to bathe and needs help with her change of clothes. When you knock and enter, you see that her daughter is visiting. Respond to Miss Mattie's daughter.	Daughter: Just give us a few more minutes to say good-bye. I don't think mom wants a bath today. Can you take her out for a walk instead?

<b>Checking in</b>	Miss Mattie's daughter wants to talk to you in the hall. She has not visited for a while. Respond to Miss Mattie's daughter.	Daughter: How's she been doing? I've been so busy lately. It looks like she's losing weight or something. How's she doing?
<b>Wants to chat</b>	It has been a busy afternoon. You have 4 residents to check and the nurse supervisor has asked to see you as soon as possible. You begin by quickly checking in on Miss Mattie.	Resident: Oh, how are you this morning? I saw you downstairs but you didn't see me. Come and see a picture of my grandbaby. This is Miss Celeste. Isn't she cute? Aren't they adorable? That's my baby.
<b>Confused</b>	As you are passing by, you hear noises from Miss Mattie's room. Miss Mattie seems agitated so you go in to calm her down.	Resident: What? Where? What is this place? I'm sorry, but I'm trying to find out... where I am? I'm not sure...
<b>Can't speak</b>	It is the end of the day. You go in to say goodnight to Miss Mattie.	Resident: (laying in bed, tries to speak but can't get words out.)

Table 2 CNA demographic characteristics		
	N	%
Race/ethnicity		
black	35	100
gender		
male	8	22.9
female	27	77.1
age		
<26	9	25.7
26-35	17	48.6
>35	7	20.0
Marital status		
Single/divorced/widowed	23	65.7
Married/partnered	12	34.3
Education		
High school	18	51.4
Some post-high school	9	25.7
College graduate	6	17.1
Immigration status		
asylee	3	8.5
U.S. citizen	5	14.3
Permanent resident	27	77.1
Length of time in U.S.		
1 year or less	7	20
2-3 years	14	40
4-5 years	8	22.9
More than 5 years	6	17.1

Table 3 Examples of CNA communication Behavior, by RIAS composite

RIAS Composite		Communication Behavior	Example of CNA Communication
<b>Instrumental</b>	Data gathering: biomedical	Questions related to treatment, medication, medical history, and other medical problems	From 0-10 what you say your pain is?
	Data gathering: lifestyle/psychosocial	Questions about social and family and questions related to feelings	Is she your first baby? (looking at photo)
	Education and counseling: biomedical	Giving Information about treatment, medication, other medical information	Just press the button.(when you need something)
	Education and counseling: lifestyle/psychosocial	Giving Information about social and family relations exchanges related to feelings	To me, sitting down in the room will keep you more worried about why your daughter didn't come.
	Facilitation and activation	Facilitating statements and questions to elicit opinions, permission, understanding, and reassurances	I am here to help you.
	Orientation/Instructions	Directive statements providing orientation or instructions	Let me go and get your dinner.
<b>Socio-emotional</b>	Rapport building: positive	Laugh, compliment, shows agreement or understanding, approval	Oh! You have beautiful family pictures.
	Rapport building: emotional	Empathy, legitimizing, concern or optimism, reassurance, and self-disclosure	I will be in trouble.(if my supervisor finds me chatting with you)
	Rapport building: negative	Disagreements and criticism	I hear you but your mom takes a bath every day and I think she needs a bath.

Rapport building: social

Personal remarks,  
nonmedical chitchat

Your grandson will  
be happy to see you  
eating.

Table 4 Instrumental and Socio-emotional RIAS composites

	<b>Composite</b>	<b>Mean(sd)</b>	<b>% of all talk</b>
<b>Instrumental</b>	Data gathering: biomedical	2.09(1.96)	2.7
	Data gathering: lifestyle/psychosocial	2.41(2.21)	3.1
	Education and counseling: biomedical	8.28(4.83)	10.8
	Education and counseling: lifestyle/psychosocial	8.06(5.79)	10.5
	Facilitation and activation	8.44(5.67)	11.0
	Orientation/Instructions	12.81(6.94)	16.6
	Total		54.5
<b>Socio-emotional</b>	Rapport building: positive	9.34(4.62)	12.1
	Rapport building: emotional	18.37(11.69)	24.0
	Rapport building: negative	.125(.421)	.20
	Rapport building: social	7.25(4.56)	9.4
	Total		45.5



Table 5 Correlations of RIAS categories and expert ratings of care quality

	<u>Data gathering</u>		<u>Counseling</u>		facilitation	procedural	<u>Rapport Building</u>		
	Bio-medical	Psycho-social	Bio-medical	Psycho-social			positive	emotional	Social
<b>Scenario</b>									
Introductions	-	-	.04	-	.00	-.18	-.01	.06	.04
Depression	-	.30*	.24+	.17	.21	.25*	.00	.13	.18
Feeling Cold	-.26*	-.15	.03	.23	.27*	.24+	-.20	.01	.05
Feeling Pain	.30*	.24+	.25*	-	.08	.02	-.09	.03	.08
Family Member: change of plans	-	-	.10	.06	.26+	.24*	.22	.07	.00
Family member: status update	.37*	.26+	-.05	.11	.14	.29*	.00	-.30*	.29*
Feeling Lonely	.37*	.00	-	.09	-.10	.05	.18	.14	.30*
Confusion	-.09	-.05	.21	.25+	.27*	.23	-.14	-.03	.56**
Can't speak	-.06	.16	-.20	.18	.12	-.21	-.35*	-.07	.03

<sup>+</sup>p<.1

\*\*p<.05

\*\*\*p<.01

Table 6 Correlations of RIAS composite categories and spoken English proficiency

	<u>Data Gathering</u>		<u>Counseling</u>		Facilitation	Procedural	<u>Rapport Building</u>		
	Bio-medical	Psycho-social	Bio-medical	Psycho-social			Positive	Emotional	Social
<b>Scenario</b>									
Introductions	-	-	-.11	-	.30*	.28+	.00	-.03	-.19
Depressed	-	.30*	.40*	.13	-.25+	-.11	-.25+	-.08	.35*
Cold	.04	.05	.36*	.18	.13	-.08	-.11	-.00	.17
Pain	.00	.22	.18	-	.24+	.08	.13	.26*	.05
Family Member: change of plans	-	-	.30*	.08	.07	.14	.18	-.14	.02
Family member: status update	.04	-.07	.20	.15	.09	.11	.25+	.15	.10
Wants to talk	.04	-.15	-	-.16	.20	.56**	-.15	-.04	.08
Confused	-.18	.13		-.03	.08	-.06	.11	.26	.13
Can't speak	-.17	-.08	-.02	.34*	-.22	.32*	-.22	.25+	-.05

+p<.1

\*p<.05

\*\*p<.01

## **Immigrant Certified Nursing Assistants: Factors Related to Quality of Care**

## **Abstract**

**Background:** Approximately one-fifth of all Certified Nursing Assistants (CNA) working in institutional long-term care facilities are immigrants. Linguistic difficulties related to immigrant status may interfere with CNA-resident communication and have been cited as one factor in perceptions of poor care.

**Purpose:** The purpose of this study is to examine immigrant CNAs' background factors and spoken English proficiency affect quality of care. In addition, CNAs' self-ratings were compared to expert ratings and intended career paths of immigrant CNAs were examined in relation to background, quality and language proficiency.

**Design and Methods:** The study used videos of a simulated nursing home resident in a "talk to the camera" design. A convenience sample of 35 immigrant CNAs provided brief responses to 9 care challenge videos. CNAs and CNA experts rated the quality of the care provided in the brief responses. CNAs and a linguistic expert rated the CNAs' spoken English proficiency. Bivariate correlations were used to examine the relationships between ratings of quality and language proficiency as well as background characteristics and future career plans.

**Results:** There was a significant correlation between quality and spoken English proficiency. Immigrant CNA quality was related to age and years on the job. CNAs with the highest quality ratings were least likely to plan to continue working as CNAs.

**Implications:** These findings contribute to knowledge of factors that influence CNA quality of care. The results suggest that increased attention to language training and support for immigrant CNAs may increase quality of care.

## **Introduction**

By 2050, there may be as many 27 million elderly Americans requiring some form of long-term care (Kaye, Harrington, & LaPlante, 2010). The majority of long-term care needs are met by unpaid care givers such as family, but those who need the most care may not be able to remain at home. Those with the most severe needs and the frailest elderly are cared for in nursing homes (Dawson, 2007). Nursing home facilities are designed to provide both assistance in daily living tasks such as eating, dressing and bathing for those who need such assistance and to provide on-going medical care for the acute and chronic conditions that become more prevalent as people age.

In nursing homes, Certified Nursing Assistants (CNAs) perform up to 80% of the direct care of residents (Harmuth & Dyson, 2005; Waxman, Carner, & Berkenstock, 1984). Like many other high demand-low wage industries, direct care positions such as those in nursing homes are increasingly filled by immigrants, particularly women. Approximately 20% of CNAs in long-term care facilities are foreign-born (Squillace et al., 2009). While immigrant CNAs come from all over the world, many come from Latin America, and they are increasingly arriving from developing regions, such as Africa (Arends-Kuenning, 2006; Khatutsky, Wiener, & Anderson, 2010).

Federal requirements for nursing assistant certification mandate a minimum of 75 hours of training 16 hours of which must be hands-on clinical training. To demonstrate that they have mastered the necessary skills, certification candidates must pass a state or federal approved competency evaluation. Individual states vary in how they implement the federal training and evaluation requirements, and 30 states require training beyond 75

hours. English language requirements for CNA certification are minimal; candidates are required to take the certification exam in English but may ask for it to be administered orally, bypassing written literacy. Moreover, a program administrator, rarely trained in language evaluation, must verify that candidates can communicate in English. There is no standard for this verification process.

Post certification, there is no career development path for CNAs. At least twelve hours of continuing education are required to maintain certification but there are no opportunities for advancement through further CNA training. Indeed, CNA wages reflect the stagnancy of this profession. CNAs with 10 or more years of experience averaged just \$2/hr more than those who began less than 1 year ago. (Squillace et al., 2009). CNAs hoping to advance in the medical field may enter programs that train them to become Licensed Practical Nurses (LPN) or continue their education to become Registered Nurses (RN), but this is seen as a separate career track in terms of training requirements and certification (Redfoot & Houser, 2005). Career path is an important factor related to CNA turn-over which is estimated to vary between 25% and 100% annually, depending on the location. Such high turnover rates have economic implications for the long-term care industry and the provision of quality care to residents (American Health Care Association, 2008).

Despite little attention to assessment of language proficiency in the certification process, Redfoot and Houser (2005), among others, have noted that it is an important measure of caregiver quality. CNAs must be able to communicate effectively with residents, co-workers, supervisors and residents' family members (Direct Care Alliance, 2013). Moreover, in nursing homes, CNAs are responsible for almost every aspect of the

residents' daily lives and are a primary source of social interaction for residents.

Language and communication concerns are frequently cited as areas for increased training, and these concerns are not unsupported. According to data from the NNAS, 51% of immigrant CNAs reported communication difficulties (Khatutsky et al., 2010).

English language fluency is the most obvious source of communication difficulty as English is not the native language of over half of all immigrant CNAs. In the 2000 Census 12% of CNAs in LTC settings reported that they could not speak English or do not speak it very well (Lowell, 2012; Martin, Lowell, Gzodziak, Bump, & Breeding, 2009; Redfoot & Houser, 2005). Even for English speaking immigrant CNAs, accents and vocabulary from various forms of world English can be an obstacle to communication (Kingma, 2007). Martin, et al noted that speaking ability including accent is often the cause of perceptions of poor care (2009). Indeed, the immigrants in Ryosho's (2011) small-scale study were targeted for complaints based on their accents.

The purpose of this study was to examine the relationship between independent expert ratings of immigrant CNAs' spoken English proficiency and the quality of their performance in response to standardized care challenges presented in brief video clips in a "talk to the camera" simulation. We were also interested in the relationship between expert and CNA self-ratings of spoken English and performance during care challenges and how these ratings may relate to the CNAs' anticipated career path.

Three research questions guided this report:

1. Is immigrant CNAs' spoken English proficiency related to overall quality care?

2. How do immigrant CNAs self-assessments (of spoken English language proficiency and quality) relate to experts' assessments?
3. How do CNA background characteristics (such as native language and education) relate to ratings of CNAs' spoken English and quality of care and intended career paths?

### **Study Design and Methods**

***Sample characteristics:*** A convenience sample of 35 immigrant CNAs was recruited via flyer and recruitment table on the campus of a community college, in the Washington, DC metropolitan area. Eligibility criteria included 1) certification as a CNA 2) current employment as a CNA in a nursing home (full or part-time), and 3) immigrant status (defined as having been born outside of the United States). All 35 study participants self-identified as Black/African American, 27 (77%) were women, and the average age was 32. The majority of participants (60%) lived in the United States for less than 3 years and most (77%) were permanent residents. About half (55%) of the subjects were single and all but one had completed high school in their home country.

Particularly relevant to the current analysis, study participants reported speaking more than 19 languages and 24 CNAs (68.5%) listed a major African language or African dialect as their native language. Five CNAs (14.3%) named English as their native language. All but two CNAs planned to pursue further education; 26 (74.6%), intended to become registered nurses while the remaining 7 intended to pursue advanced degrees in health sciences, medicine or radiology.



The study was reviewed and approved by the Johns Hopkins School of Public Health Institutional Review Board as well as the Prince Georges Community College Institutional Review Board. All participants provided informed consent which included a willingness to be videotaped.

***Video creation:*** In preparation for data collection, videos were created of nine brief (~10 seconds) scenes portraying an elderly female nursing home resident. Each scene depicted a different care challenge that a CNA could be expected to encounter in a typical day working in a nursing home (making introductions, resident wants to chat, resident is in pain). The completed care challenge videos were loaded into a computer program and paired with introductory text. The resident dialogue and introductory text for each of the care challenges used in analysis are described fully elsewhere<sup>1</sup>.

***Data Collection:*** After subjects provided informed consent and completed a background questionnaire, they were oriented to the computer program and asked to respond to the care challenges as if they were responding to a resident. The participants were given a practice segment and shown how the program works. The program then presented the videos sequentially. The subjects' responses to the videos were video-recorded. Video creation and data collection procedures are described in full detail in the companion paper<sup>2</sup>. Due to technical difficulties and time constraints, the 35 respondents yielded 32 complete responses.

## **Measures**

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<sup>1-2</sup> Massey, M., Roter, D., & Wendus, K. (2013). *Communication patterns of immigrant CNAs*. Manuscript in preparation.

### *CNA expert ratings*

**Quality:** The institute of Medicine (2001) defined quality as “The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.” CNA instructors are responsible for imparting current professional knowledge as well as assessing clinical competencies of CNA candidates, and are, therefore, well-suited to assess CNA quality of care. CNA quality of care was rated by a CNA instructor with 15 years’ experience providing clinical on the job training for CNAs in long-term care settings. Before assigning an overall rating of quality, the rater was asked to consider several dimensions of quality including address of medical and emotional concerns, use of appropriate language and proper demeanor. Taking these elements into consideration, the rater then assigned an overall quality rating to each CNA’s performance, with 10 being the highest quality of care and 1 being the lowest. Reliability of the expert ratings was assessed by having a random selection of 12 response sets double-coded by a second rater with over five years of experience in supervising CNAs. Inter rater reliability, assessed by calculation of a Pearson correlation coefficient between the two raters was .89 (95% CI=.681-.969). The overall ratings of CNA quality of care ranged from 1 to 10 with a mean of 4.6 and standard deviation of 2.38).

***Spoken English proficiency:*** The spoken English of each subject was assessed by a rater with over ten years’ experience in applied linguistics. Ratings were given on four language domains: Structure, word choice, rhythm and level of accent. Each component was assessed using a 5-point Likert scale. Structure was defined as the ability to produce meaningful grammatically and syntactically accurate English sentences. The word choice

was considered in terms of appropriate vocabulary. The rhythm assessed the degree to which phrasing and timing of speech aided fluency and comprehension. The level of accent reflected the degree to which accent interfered with comprehension.

The domain scores were combined for an overall spoken English rating. The internal consistency of the spoken English rating scale was adequate as reflected in a Cronbach's alpha of .80. Intra-coder reliability was established by randomly drawing a sample of 10 videotapes for double coding by the same rater ( $\kappa=.915$ , 95% CI= .696-.978). The overall ratings of spoken English ranged from 7 to 17.5 with a mean (sd) of 12.19 (2.63) with the highest rating in each area indicative of native-like facility.

#### *CNAs Self-ratings*

***Quality (self):*** CNAs were asked to rate the quality of their caregiving in their responses to the care challenges by considering several areas including communication skills and technical skills. The overall quality rating, which was used for analysis, ranged 6 to 10 with a mean (sd) of 8.5 (1.3).

***Spoken English proficiency (self):*** CNAs self-rated their English language skills on four domains, speaking, listening, accent and vocabulary, on a 5-point Likert scale. These were combined for an overall score. The self-ratings ranged from 5 to 15 with a mean of 10.7 and standard deviation of 2.7.

#### **Analysis**

Frequencies were calculated for background characteristics (demographic variables as well as variables related to language use and education). Pearson correlation coefficients were used to investigate relationships between expert ratings and self-ratings

of quality and language proficiency. Because this is a small exploratory study in a new area, trends in the data were noted for relationships up to p-values  $<.10$ . Statistical significance was considered to be p-values of  $<.05$ .

## Results

Relationships of background characteristics to spoken English proficiency and quality of care are presented in **Table 1**. Linguist ratings of spoken English were negatively correlated with CNA age such that older CNAs were more poorly rated in terms of spoken English and there was a trend suggesting that those who were educated in English also received higher expert ratings. In contrast, self-ratings of English proficiency were related not to age but to gender (males self-rating their language skills as better than females), having learned English at a young age and use of English as the primary home language. CNA expert ratings of quality were associated with both age and gender (males had higher ratings) as well as length of time working as a CNA. Older CNAs and those with more education gave themselves higher quality ratings. Moreover, higher self-ratings of quality were also associated with length of time in the U.S and length of time working as a CNA.

Independent, expert and CNA self-ratings of both English Proficiency and care quality showed a similarly positive, although non-significant relationship. However, independent expert ratings of spoken English and quality of care were significantly related. CNAs' self-ratings of English proficiency and quality are also significantly related (**Table 2**).

Participant's plans for future certification or training were explored in relation to the expert ratings of spoken English and care quality (**Table 3**). CNAs who received

higher quality ratings were less likely to anticipate that they will still be working as a CNA in five years but they were more likely to plan to pursue graduate education rather than nursing credentials. Male CNAs and those with higher education levels were more likely to indicate a plan to pursue graduate education in the future.

## **Discussion**

This study examined a variety of factors that influence expert ratings of immigrant CNAs' quality of care and found that an independent rating of English language proficiency is a significant predictor. Previous studies have found that difficulties with spoken English lead to perceptions of poor care by residents and supervisors (Martin et al., 2009; Ryosho, 2011).

The present study indicates that there is a relationship between the language skills of immigrant CNAs and the quality of care they provide. That language deficits can impact care is not surprising given the importance of communication between CNAs and residents. Immigrant CNAs who struggle with English may not have the level of vocabulary necessary to communicate fluently in a variety of contexts. It is also possible that when immigrant CNAs struggle with language, they don't have the cognitive capacity to also attend to instrumental and decision making tasks. These findings are in concurrence with the few studies that have explored the relationship between quality of care and language proficiency in foreign-born nurses and international medical graduates. In these studies, it was suggested that language proficiency was an element of quality separate from clinical expertise and one that would require additional attention and

training to master (Eggly et al., 1999; Hall, Keely, Dojeiji, Byszewski, & Marks, 2004; Kingma, 2007).

Immigrant CNA quality was also associated with age and length of professional experience as a CNA. Older CNAs and those with more experience tended to receive higher ratings. Expert quality of care ratings were not associated with other background characteristics suggesting that CNA quality of care is strongly related to clinical and communicative skills that can be attained through experience on the job.

Quality was also related to intent to leave the CNA profession. Immigrant CNAs with the highest ratings of quality were less likely to plan to be working as a CNA in the future. The results also show that CNAs with post-secondary education are more likely to plan to be working as a CNA in one year but not in five years. Previous studies have found that some immigrants work as CNAs because it provides steady employment and experience in the health care sector while they pursue further medical education or certification (Hussein & Manthorpe, 2005; Priester & Reinardy, 2003). These CNAs work in long-term care for several years until they can gain the credentials to be admitted to graduate school. In particular, this seems to be the typical trajectory for male CNAs in this small, convenience sample.

There was very little agreement between self and expert ratings of quality. This suggests that either CNAs use different criteria to rate their quality than experts do or that CNAs are not skilled at evaluating the quality of the care they provide. Other studies that have examined the self-assessment skills of care providers have also found a discrepancy between self-ratings and actual performance (Baxter & Norman, 2011; Cole, 2009). It seems that self-assessment is a difficult skill and one that must be explicitly taught. In

fact, the CNAs in the present study with at least some post-secondary education were more critical in their self-ratings of quality. This finding is in agreement with other studies which have shown that those with academic training are more skilled at overall self-evaluation (and therefore, more self-critical) (Wilson & Lindsey, 1999).

There was a trend between CNAs' and linguists' ratings of spoken English proficiency. It seems that CNAs are somewhat aware of their level of language proficiency. The CNAs who learned English at an early age and those who speak English at home gave themselves higher ratings of spoken English suggesting that ease of communication is primary factor in how CNAs rate their spoken English proficiency. However, these factors had no impact on linguist ratings of proficiency. Ease of communication does not indicate mastery of academic English or the forms of standard American English which may differ greatly from other forms of world English, so linguists may focus on different aspects of English proficiency than CNAs do.

### **Implications for practice**

Results of this study suggest several areas for improvement in the training and certification of immigrant CNAs. As the LTC industry increasingly relies on immigrant care workers, the language and communication training needs of these workers must be a priority.

That CNA spoken English proficiency is related to quality, suggests the need for a minimum standard of spoken English proficiency prior to certification. There is currently no minimum standard. Instead, language competency is assessed by CNA program administrators who are not trained in applied linguistics.

Further, the results suggest that immigrant CNAs may benefit from ongoing language skills training. Recommendations for English instruction for immigrant nursing students based on the Cummins model suggest teaching language skills in the context of clinical skills practice (Abriam-Yago, Yoder, & Kataoka-Yahiro, 1999).

Ongoing training in clinical skills is also important for improving overall CNA quality since those who plan to stay on the job the longest are also those with the lowest quality ratings. Given the lack of correlation between self and expert ratings of quality, immigrant CNAs could also benefit from explicit training in self-evaluation. Supervision is also important for CNAs who are not yet skilled at self-evaluation.

### **Limitations**

These results should be interpreted in light of several limitations. First, the sample size of this study was relatively small. It was not possible to calculate multivariate correlations with such a small sample size, so at times the particular relationships between multiple variables are not clear.

The generalizability of the findings is limited. The sample was made of a convenience sample drawn from immigrant CNAs in the Washington DC metropolitan area. Certainly, a sample of immigrant CNAs from a different area would not have the same demographic characteristics. The fact that the study sample was made entirely of immigrants from a continent where many people speak English either as a first or second language might yield different results than if the sample had been made only of those who learned English in school.



## **Conclusion**

Despite these limitations, this study indicates intriguing avenues for further research. The present study does not address language and quality assessments by nursing home residents or their family members. Residents and family members may have a different set of criteria by which to judge quality. Future studies should focus on resident and family members' perceptions of spoken English and quality of care.

Currently, there is a disconnect between the needs of the long-term care industry and CNAs' skills, preparation and plans for the future. Future research should investigate ways of providing training and career paths within the CNA field that will meet the needs of immigrant CNAs and the nursing home residents they care for.

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Table 1 Correlations between background factors and English proficiency and quality

	Spoken English proficiency (linguist)	Spoken English proficiency (self)	Quality (expert)	Quality (self)
Age	-.40**	-.13	.30**	-.22*
Gender	.08	.20*	.25*	.20*
Years in US	-.02	-.07	.13	.26*
Years as CNA	.02	-.25 <sup>+</sup>	.32*	.14
First language English	.01	.26 <sup>+</sup>	.11	.00
Age learned English	.03	.50**	.1	.16
Speaks English at home	.09	.52**	.25 <sup>+</sup>	.14
Years of education	.16	.20 <sup>+</sup>	.04	-.56**
Education in English	.34 <sup>+</sup>	-.30 <sup>+</sup>	-.25	-.26

<sup>+</sup>P < .1

\*P < .05

\*\*p<.01

Table 2 Correlations between ratings of quality and spoken English proficiency

	English proficiency (self)	CNA Quality (self)	CNA Quality (expert)
English proficiency (self)	1.0	.13*	-.05
English Proficiency (linguist)	.20 <sup>+</sup>	-.03	.26*
CNA Quality (expert)	-.05	.20 <sup>+</sup>	1.0

<sup>+</sup>P < .1

\*P < .05

Table 3 Correlations between background characteristics, ratings and future plans

	CNA in one year	CNA in 5 years	Plan to pursue nursing certification (LPN/RN) vs. plan to pursue graduate degree <sup>1</sup>
Age	-.54	-.07	.07
Gender (higher is male)	.11	.11	.42*
Education in years	.23 <sup>+</sup>	-.13	.40**
Quality (expert)	.04	-.30*	.33 <sup>+</sup>
Spoken English (linguist)	.03	.10	-.09

<sup>+</sup> P < .1

\*p<.05

\*\*p<.01

<sup>1</sup> Only one CNA did not plan to pursue further education- either nursing credentials or a graduate degree. For column 3, n=31.

**Expert and self-ratings of immigrant CNA care quality: Observational insights into CNA performance in standardized care challenges**

## **Abstract**

**Objective:** This study used qualitative methods to examine factors that impact immigrant CNA quality of care.

**Methods:** A convenience sample of 32 immigrant CNAs provided brief responses to videos of nine care challenges involving a simulated nursing home resident in a “talk to the camera” design. CNAs rated the quality of care they provided in the responses in a recorded “think aloud” exercise. CNA experts viewed the CNAs’ responses to the care challenges and provided qualitative ratings of quality. Transcripts of the “think alouds” and CNA experts’ comments were analyzed for themes related to aspects of immigrant CNA care that impacted quality.

**Results:** The eight themes that were identified included language use, orientation, giving choice, calling for help, assessing the situation, meeting psychosocial needs, lying/giving false reassurance and building relationships.

**Practice implications:** The results offer insight into factors associated with CNA care quality and confirm the need for ongoing CNA training opportunities for immigrant CNAs and suggest specific areas to target in CNA training.

## **Introduction**

Certified Nursing Assistants (CNAs) perform up to 80% of the direct care of residents in long-term care facilities such as nursing homes (Harmuth & Dyson, 2005; Waxman, Carner, & Berkenstock, 1984). Like many other high demand-low wage industries, direct care positions are increasingly being filled by immigrants, particularly women. Although estimates vary, approximately 20% of CNAs who work in long-term care facilities are foreign-born (Squillace et al., 2009). These immigrants come to the U.S. from all over the world (U.S. Census Bureau, 2009), frequently from developing regions such as those in Africa (Arends-Kuenning, 2006). In as much as these immigrants have diverse linguistic, cultural and educational backgrounds, there is concern that these factors may contribute to communication difficulties that can interfere with resident care.

CNAs must be able to communicate effectively with long-term care residents, their family members and co-workers and supervisors (Direct Care Alliance, 2013). CNA reports of changes in a resident's health, functioning and behavior are a critical link in the care chain. Moreover, CNAs are responsible for almost every aspect of direct care and often the primary source of social contact. Thus, for individuals dependent on CNAs for their care, communication can have a critical impact on overall well-being and quality of life.

Several studies have linked positive CNA communication with improved outcomes. For example, Roth et al. found that affective communication initiated by CNAs decreased agitated behavior in a population of nursing home residents (Roth, Stevens, Burgio, & Burgio, 2002). Nevertheless, CNAs do not initiate much communication with residents, even during direct delivery of care (Nussbaum, 1993;



Simmons, Babineau, Garcia, & Schnelle, 2002). Observation of CNA's work in nursing homes revealed that 11.8% of CNA work time included any engagement in verbal interaction with nursing home residents, and neutral interactions (with neither positive nor negative affect) appear to be the norm (Burgio et al., 1990; Carstensen, Fisher, & Malloy, 1995). Immigrant CNAs in particular recognize a need to enhance their communication skills (Ripich, Wykle, & Niles, 1995). According to data from the NNAS, 51% of immigrant CNAs have reported communication difficulties.

English language fluency is the most obvious source of communication difficulties for most immigrants. Even for English speaking immigrant CNAs, accents and vocabulary from various forms of world English can be an obstacle to communication (Kingma, 2007). Martin, et al (2009) noted that speaking ability including accent is often the cause of perceptions of poor care

Culturally rooted attitudes and beliefs may play a role in guiding how immigrant CNA's approach their tasks. For example, beliefs about what constitutes good care or attitudes about aging can influence when and how care is rendered (Martin et al., 2009). Anderson, et al (2005) described how CNAs' "mental models," for example of dementia or depression, can be a useful guide to care actions by providing ready interpretation of residents' behavior. However, they also cautioned that, unchallenged, mental models may lead to poorer care.

CNA training has been widely criticized as inadequate. Since the first regulations were enacted in 1987, basic CNA training has been set at 75 hours, including 16 hours of hands-on clinical training. CNA training covers a broad range of topics, including

interpersonal communication, infection control, residents' rights, basic nursing skills and personal care skills associated with assisting residents in activities of daily living. To qualify for certification, candidates must demonstrate that they have mastered the necessary skills and pass a state or federal approved competency evaluation. A program administrator must verify that candidates for certification are proficient in spoken English. Despite criticism that training is insufficient, (Fineberg, 2008) CNAs in general and immigrant CNAs in particular, report feeling well prepared in all aspects of training (Khatutsky, Wiener, & Anderson, 2010). Regardless of the training they receive, there is often a large gap between what is taught in certification classes and what nursing assistants learn on the job. Due to lack of effective orientation or supervision, new nursing assistants are often left on their own to figure out the intricacies of the job (Feuerberg, 2001). Once employed, CNAs are frequently overseen by supervisors who often have a heavy workload and are not trained to manage people (Brannon, Zinn, Mor, & Davis, 2002).

The purpose of the current study is to examine immigrant CNAs' and CNA experts' assessments of CNA quality care to standardized care challenges.

### **Study Design and Methods**

The study utilized an exploratory, descriptive design to gain insight into immigrant CNAs' response to standardized care challenges by capturing their direct responses to brief video clips in a "talk to the camera" simulation. This study was reviewed and approved by the Johns Hopkins School of Public Health Institutional Review Board as well as the Prince Georges Community College Institutional Review Board. Participants provided oral informed consent.

### *Participants*

A convenience sample of 32 immigrant CNAs was recruited via flyer and recruitment table on the campus of a community college in the Washington, DC metropolitan area. Eligibility criteria included 1) certification as a CNA 2) currently employed as a CNA, and 3) immigrant status (defined as having been born outside of the United States). All 32 study participants self-identified as Black/African American, 24 (77%) were women, and they averaged 32 years of age. The majority of participants (60%) have had in the United States for less than 3 years and most (77%) were permanent residents of the United States. About half (55%) of the subjects were single and all but one had completed high school in their home country.

### *Data Collection*

#### *Nursing Assistant responses to standardized care challenges*

To collect data on how CNAs respond to residents in routine care situations, study participants were asked to respond to nine care challenges. These care challenges were comprised of short video-recorded scenes in which an actor simulated a long-term care resident (or resident's family member). The challenge scripts were developed with input from working CNAs and Nursing Assistant certification instructors, as well as direct observation of situations in long-term care facilities. An interactive computer platform adapted from an earlier study was used to present the challenges in a coherent sequence that allowed participants to respond directly to the video image on the computer screen. Each response was video recorded by the computer's webcam. Scripts of the nine care challenges are presented in **Table 1**.

CNAs and experts were asked to rate the appropriateness and accuracy of the video scenarios. Verisimilitude (realism) of both the scenarios was confirmed by CNAs and CNA experts (CNA instructors and nursing home facility supervisors). Additionally, CNA instructors were asked to rate the realism of the CNA responses. The CNA responses were confirmed to be highly realistic.

After each participant completed a background questionnaire, the investigator provided instruction on how to use the computer program and respond to the care challenges by showing an introductory scene of a co-worker and having the CNA respond, speaking to the camera as if responding directly to the co-worker. Once the participant knew how to advance through the program, the investigator left the room but was available to assist if a problem arose.

### ***CNA qualitative self-assessment***

The next phase of data collection presented a “think-aloud” exercise. The think-aloud method has been used extensively in previous research in a variety of settings to access the cognitive processes involved in task performance (Funkesson, Anbäcken, & Ek, 2007; Simmons et al., 2002). After responding to the standardized care challenges, the CNAs viewed the challenges a second time and were instructed to “think-aloud” about each of their responses, guided by a series of open-ended questions. These questions are presented in **table 1**. CNAs’ responses to the “think aloud” were recorded and transcribed for analysis.

### ***Expert qualitative assessment***

Two expert raters assessed the quality of the CNAs’ responses to each of the nine care challenges. One of the raters had 15 years of experience instructing CNAs in the

classroom and providing clinical, on-the-job training for CNAs in long term care settings and the second had over five years of experience as a CNA trainer. The first rater viewed all 32 response sets while the second rater viewed 12 response sets. The raters assessed care quality in regard to the address of medical and emotional concerns, demeanor and use of appropriate language. Raters provided qualitative written assessments of the elements of CNA performance for each of the 9 care challenges. Raters made notes of CNA behaviors that contributed to quality care and those that detracted.

### *Data analysis*

CNA experts' assessments and transcripts of the CNAs' responses to the "think aloud" exercise were analyzed using a grounded theory approach (Corbin & Strauss, 2008; Glaser & Strauss, 1994). Analysis proceeded in three phases. The first phase was open coding when codes and themes were identified during a thorough read-through of the transcripts by the first author. The second phase involved re-reading the text to make sure that codes were exhaustively applied. Additional codes were identified during this phase. The third phase was analysis of overall patterns presented in the CNA narrative responses. Analytical memos were written throughout to ensure that the process was organized and thorough.

## **Results**

Eight themes emerged as problem areas in the CNA responses to the care challenges, as described below. Although there was variation in the quality of the CNA responses, all 32 CNAs exhibited at least one of the behaviors indicated by the quality raters as problematic. Examples of problematic CNA communication and experts' comments are presented in **Table 2**.

**(1) Language use.** All but two CNAs displayed at least some difficulty with language. The experts noted that eight CNAs appeared uncomfortable with spoken English. In addition to grammatical errors, the experts noted difficulties with problematic phrasing, speed and accent. In particular, the experts were concerned with aspects of spoken language that interfered with comprehensibility. One rater, commenting on a particular CNA, said “She does not seem comfortable with English. She should work on phrasing so residents can better understand her.”

The raters also commented on imprecise word choice. Problems included using terms like “Ma” or “Mom,” to address residents, the use of jargon or misrepresenting oneself as a nurse.

Many CNAs made these errors when introducing themselves:

*Ok Ma! How are you today, Ma?*

*Good morning! I'm your nurse today.*

*I'll be doing your ADLs today.*

The experts commented:

*Don't call her "Ma" use her name.*

*She is NOT a nurse and should not call herself a nurse.*

*Don't say ADLs. What's ADLs? Say 'I will be giving you your bath and meals or getting you out of bed.'*

Ten CNAs gave responses that were longer than necessary, or they repeated themselves. In addressing the resident who did not want to go down for dinner, one CNA's response was quite lengthy:

*Ok miss Mattie, You say you don't want to go down stairs you don't want to eat dinner nobody want to see an old lady. That's not true. Everybody loves you.. They like you. They want to see you. They want you to eat and be healthy so tomorrow they can play and laugh with you. I know your daughter is coming. She promised she is coming so I know she is coming. Let me go and get your dinner. I will be by your side so you can eat your dinner. The food is good and it tastes good. Everybody loves you. Nobody hates you, you said nobody want to see an old lady. Tomorrow everybody will be home. No I don't want you to put in mind that nobody want to see an old lady. No. You are ok.*

This elicited the following comment by a rater, "This CNA can use more concise statements otherwise residents may find him difficult to follow."

**In the think-aloud,** the CNAs themselves did not seem to be aware that they might have difficulties related to language. None of the CNAs mentioned language as a potential barrier to effective communication with residents.

**(2) Orientation.** Failure to adequately orient the resident was a problem for most of the CNAs, particularly in the first challenge where orientation is particularly important as noted by a rater "The CNA should state the resident's name, let the resident know who she is and state her purpose for being there." One CNA introduced herself without doing either:

*Yes Ma'am. I'll be the one taking care of you from now on.*

**In the think-aloud**, most CNAs made it clear that they knew the elements of a quality introduction. One CNA said, “(in the introduction) I told her I would take care of her and told her my name and made her feel comfortable with me.” Unfortunately, despite that fact that this CNA clearly knows what is expected, she did not provide her name in her introduction.

**(3) Giving choice.** The raters viewed the offering of choice as an important strategy to increase resident autonomy as well as to manage resident behavior. One expert said that CNAs should “offer choices so that the CNA duties of caring for residents’ ADLs can be accomplished.”

In some cases, CNAs presented only one option:

*I'm going to put socks on your feet.*

*You have to come. You have to have your lunch downstairs.*

The raters felt that these responses were overly directive noting “The resident needs to have some control.”

However, a rater also noted that offering too many choices can be confusing. One CNA offered too many choices in her attempt to help the resident who was cold:

*You say you're cold. Maybe the heat is not on or is too low or the heater is too low, so I'm going to try and turn it on to the normal room temperature, or I can get you blankets or some warm drinks and you can have and keep warm.*



Offering just a few choices such as a sponge bath rather than a shower in response to the scenario where the resident does not want to bathe was suggested by the rater as a better alternative than what most CNAs did, either agreeing to no bath or insisting that the resident must have a bath.

There were examples, evident in several responses of CNAs offering a few choices when the resident did not want to go downstairs to the dining room. For example, one CNA responded:

*It's ok Miss Mattie. I could bring your food here if you want to eat here, so you can eat just a little bit- just as much as you can eat. Or you can go down.*

**In the think-aloud,** CNAs agreed with the experts that residents must have control. One CNA said, “Don’t force her to do what she doesn’t want to do.” However, none of the CNAs mentioned giving choice as a strategy. Instead, most CNAs mentioned strategies such as “convincing” and “distracting” to get the resident to do what they wanted. Alternatively, CNAs rather than trying to guide the resident’s behavior, CNAs often just did whatever the resident requested. For nearly half of the CNAs, this was cited as the best strategy to avoid agitating residents:

*The only thing you can do is give them what they want and make sure they calm. You don't want to get them agitated and you don't want them to think you don't care.*

**(4) Knowing when to call for help.** Not knowing when to call for help was a problem for over half of the CNAs. The raters indicated that it is appropriate to call the nurse when the CNA observes a change in resident status or if the resident’s needs are

outside scope of CNA care. For example, CNAs cannot give many kinds of medication, and they are not qualified to discuss the resident's medical condition with anyone.

Twelve CNAs failed to seek the nurse's input when discussing the resident's condition with a visiting relative.

*She's been doing great. Yesterday she had pain all over her body. The nurse took the temperature and she was fine.*

*She's been doing pretty well. Sometimes she stays in bed, but we've been trying our best. The nurse are always there to take care of her. Sometime she's been refusing her meals. And I've been reporting to the nurse and we've been trying to see how we can get her to eat and get her medicine but we've been trying our best. That's how she's been doing. We'll keep on trying to make sure she look good and she's healthy.*

Raters noted that conflicting reports such as these can be confusing and misleading to family members.

An equal number of CNAs were quick to call the nurse in situations where it was not necessary. Responding to a resident who complained of cold:

*What happened? Oh you want something like medicine or something like that? I'll get your nurse. Don't worry.*

*Ok just hang in there. Let me quickly call your nurse so she can come in and give you your medications.*

One rater noted, “Don’t bother the nurse! The resident doesn’t need meds just because she’s cold.” The experts concurred that frequently calling the nurse can be disruptive.

**In the think-aloud**, two thirds of CNAs commented that they thought it was appropriate to call a nurse right away under varying circumstances. Several CNAs indicated that this was because they had confidence in the nurse’s ability to handle the situation. One CNA said that when she sees that a resident is in pain, “I call the nurse. She know what to do.” Another CNA gave additional insight into reasons why CNAs might call the nurse rather than trying to manage a situation on their own by suggesting that failure to do so might get her in trouble:

*If I had stuff I put it down and run to get the nurse immediately so nothing happens behind my back. It would go against me and anything can happen and maybe cameras are there showing that I came in and that wouldn’t be good so I go get help.*

However the raters commented that before calling the nurse, the CNA should at least have gathered information that would aid the nurse in providing treatment. For example, one CNA provided a high quality response to a resident who complained of pain:

*Miss Mattie, I’ll tell the charge nurse that you’re not feeling well but before I go can you tell me your pain where it is and from 0-10 how much your pain is and I’ll take your vital signs to see your vital signs and I’ll give to the charge nurse to look at it and she can give you more treatment for the pain and I’ll take your vital signs.*

**(5) Assessing the situation.** All but two CNAs had trouble assessing the resident's needs in at least one of the scenarios. Strategies for assessing the situation include observing or listening to the resident, asking questions and assessing medical condition. CNAs described the importance of assessment:

*I will try to understand what she will say I will listen carefully*

*Listen. Always listen. Let them finish first. You run when they talking only when they throwing up. If they seem to be a comfortable position and place then listen.*

In response to the care challenge when the resident struggles to speak, Twenty-two CNAs' responses indicated that they did not observe carefully:

*Well, it's the end of my day today and I just thought it wise to pass by and say good night to you before I leave or just thinking it would be a good idea to do so since I've been with you all day, and yeah, I hope you have a good rest and hopefully to see you tomorrow. Good night.*

This response was not unusual, indicating that many of the CNAs did not notice the resident struggling to speak or did not find it cause for alarm.

Failure to assess the residents' needs lead to inappropriate responses or missed opportunities for better care. For example, when the resident cheerfully asked the CNA to look at pictures of her grandchild, one CNA responded:

*How are you today? I'm here to check on you to see how you're doing. How is it? Are you cold? Is there anything you need? I'm just checking on you. If you need help, get back to me.*

In this case, a rater noted, the CNA did not address the resident's needs at all because she responded without assessing the situation.

In the scenario with the family member who indicates that the resident does not want a bath, the raters suggested that it would be important to ask questions to find out why the resident does not want a bath. None of the CNAs did this.

Asking questions that were too general were seen by experts as an indication that the CNA had not listened well. Questions like, "What's wrong?", "What happened?" or "How are you feeling?" could be frustrating for the resident who has just explained what's going on. One rater asked, "Did this CNA listen to what the resident just said?"

**In the think aloud,** most of the CNAs recognized the need to assess the situation, but there was no consensus on what aspect of the situation should be assessed. Some felt that it was important to ask general questions:

*I want to ask the resident how she doing.*

Other CNAs prioritized gathering medical data:

*Always take the vitals.*

*The nurse want to know the blood pressure or some other informations.*

The experts were particularly troubled by the CNAs' difficulty assessing the resident's medical condition. For example, in the challenge in which the resident appeared in pain, only two CNAs asked her to rate her pain on the pain scale. The experts agreed that this would be the best approach and should be standard practice in this situation. In the scenario where the resident is cold, some CNAs offered to take her temperature; others

wanted to take her blood pressure. One asked, “Are you having headaches? Are you having any pain?” A rater commented on this, “The resident does not need her blood pressure taken just because she’s cold. Check the heat in the room. How about offering her a blanket or a sweater? Do something for her.”

**(6) Meeting psychosocial needs.** More than half of the CNAs failed to address the resident’s psychosocial needs in at least one care challenge. One rater commented on a CNA’s perfunctory response to the resident who was struggling to speak, “She should show more compassion because the resident can’t speak.....try and lessen the anxiety that she must be expressing.” Another expert, noting that several CNAs declined to look at the resident’s photos when invited, said, “CNA duty is to care for more than the physical needs of residents. They must also care for the psychosocial needs of residents- this would be one of those needs. They can take a few minutes to look at the picture.”

The raters also noted that some CNAs did not express empathy. To the resident in pain, one CNA said:

*I know you’re complaining of pain. I’m going to inform the nurse of you complaining of pain so you can tell her how severe it is so she can find out what is going on with you. I’ll be right back let me tell the nurse. Be patient.*

The raters made comments like, “Her tone sounds robotic-like.”, “Don’t tell resident to just ‘take it easy’” “Sometimes saying calm down can be dismissive.” and “Poor body language and tone. This CNA looks bored and disinterested.”

**In the think aloud**, eighteen CNAs indicated that meeting residents' emotional needs is a component of quality care. Moreover, several CNAs noted that meeting these needs makes their jobs easier:

*Try to bring her back to her sense of love. She's already lonely. That's why you talk to her and listen to her. The more you listen the better chance she'll do what you want. Just by you standing there listening you're helping her.*

*It seem like she want to talk. She needs attention so I stay with her five minutes and we talk. She talk and everything ok.*

**(7) Lying/giving false reassurance.** Thirteen CNAs lied, exaggerated or offered false reassurance to residents or family members. In some cases, this was fairly benign as when CNAs assured residents, "You're going to be ok." Other times, the falsehoods were more egregious as when a CNA told a resident, "Your daughter will be here very soon." Another said "The nurse will bring you medicine and you will be all better." Several responded to the resident who was confused by assuring her that she was in her own house. The experts not only felt that false reassurance and lies were unfair to the resident, but also, that they could be dangerous if resident became agitated.

**In the think-aloud**, four CNAs explicitly mentioned lying as a useful strategy. One CNA describer her strategy for when the resident wants to chat but she is busy:

*You say you be just one minute and tell them you'll be right back and then you go about your business and come back later.*

The CNAs seemed particularly inclined to use this strategy with family members. When the resident's daughter asked the CNA to take her mother for a walk rather than giving her a bath, most CNAs readily agreed, but many later clarified that they were just humoring the daughter. Knowing that she would soon be gone, they told her what she wanted to hear and then planned to ignore her.

*She's not the one telling me my job. I know what to do. I know my job and I let her do what she want to do and then I do my job. I give a bath.*

Similarly, when the daughter asked how her mother was doing, the CNAs often responded, "Oh, she's fine."- although some of them did offer to get the nurse to provide further details.

**(8) Building relationships.** The raters noted that the CNAs missed opportunities for relationship building, particularly with family members and this detracted from their quality ratings. The experts suggest enlisting the family member as an ally. "Ask the daughter to help bathe her mother," suggested one expert. Most CNAs wanted to have little to do with the family though. One CNA was very clear in her "think aloud" response to the scenario with family:

*I hate the family. But some families are nice. Some are mmm hmmm. But anyways. I would do what she says. Just pause, listen do what she says and leave.*

A few CNAs wanted the daughter to know that her mother missed her. When asked by the daughter how the resident was doing, CNAs expressed disapproval:



*She's stressed. She was waiting for you. I just know. Just think the more you come it will make her feel happy and better. Maybe she's stressed because she misses you.*

*She wasn't feeling well this week. If you get a chance it would be nice for you to give her a call. I'm sure you are busy but whenever you've got a few minutes calling would really help.*

**In the think-aloud**, although no CNAs expressed a desire to work with family members, few noted in the think-aloud that building relationships with residents can improve relations. One CNA observed:

*This requires lots of patience and there are people who are rude or demanding but in most cases if you do get a chance to understand someone or spend time with them or build a relationship they will be less demanding.*

## **Discussion**

This qualitative study primarily characterized the factors that influenced assessments of quality CNA care. Eight themes emerged in the assessments of immigrant CNAs' responses to standardized care challenges. Participants' think-aloud responses indicate that they agree with experts on the importance of many of these factors. However, despite this agreement, participants did not consistently use the strategies that they had noted to be important. The CNAs in this study often prioritized instrumental goals over interpersonal relationships. They were task oriented and often focused on "getting the job done." For example, CNAs repeatedly referred to the need to "convince" or "get" residents to do something. Participants were concerned most of all with keeping

residents calm. An agitated resident can be physically and emotionally difficult to deal with and can be disruptive to daily routines, so it is not surprising that CNAs will go to great lengths to avoid it. Because they were so largely task focused, much of the CNAs' communication was instrumental and in this way, even some affective communication had been instrumentalized- that is, employed to complete a task or achieve a goal.

Previous studies in care settings have found that truth-telling, or lying, can be used instrumentally (Tuckett, 2012). The CNAs in the present study demonstrated this in their willingness to offer false reassurance in challenges with both the resident and family member. Some CNAs blithely told outright lies in order to control the resident's behavior and emotions.

Similarly, other affective communication behaviors were used instrumentally. Previous studies have found that affective communication from CNAs can reduce resident agitation (Roth et al., 2002; Sloane et al., 2004) and it seems that the CNAs in this study understand this well. Listening to residents and empathizing with them helps keep them calm, and developing relationships with residents makes them more likely to cooperate. However, in focusing on the task oriented nature of caregiving, CNAs often missed opportunities for deeper emotional connection.

Goal oriented communication may also reflect immigrant CNAs' position at the low end of the workplace hierarchy. While the great majority of hands-on caregiving may fall to CNAs, they report very low levels of workplace autonomy and are rarely included in care team decisions (Currie, Harvey, West, McKenna, & Keeney, 2005). While immigrant CNAs are motivated to provide good they are also vulnerable to the demands

of supervisors, residents and family members. (Dodson & Zircavage, 2007)(Berdes & Eckert, 2007; Dodson & Zircavage, 2007; Stacey, 2005). This precarious position is reflected in their responses to the family member challenge. In their think-alouds the CNAs indicated that they give verbal agreement to family members (whether they agree or not) and then provide care in the way they think is best- even if it contradicts family members' requests. By agreeing to requests and offering false reassurance, CNAs can avoid conflict with family members and get on with doing their jobs.

CNA experts also noted that CNAs had difficulties in instrumental domains of care such as knowing how to introduce themselves or how to correctly assess the condition of residents. In many cases, CNAs demonstrate in the think-aloud that they know the correct protocol but fail to implement it in their care-giving interactions. In these cases, CNAs may need more practice implementing what they have learned in training.

CNA experts noted critical deficiencies in many of the CNAs' use of spoken English. Spoken English proficiency has been cited as factor in perceptions of poor care by residents and family members (Martin, 2009, Kingma, 2007). However, exactly how language proficiency affects quality of care has not been described. Experts in the present study gave examples of how language proficiency detracted from quality when communication between CNAs and residents was impeded. Rather than being a marker for superficial discrimination as has been suggested (Ryosho, 2011), language proficiency, including accent, can have a real impact on the quality of care provided.

## **Implications for practice**

These results are in agreement with previous recommendations that CNA training curriculum requirements should include increased training in skills such as communication, critical thinking and empathy (Feuerberg, 2001). Specific areas for improvement of CNA training and practice include assessment, empathy and truth-telling.

As recommended by the Congressional Commission on Long-term Care (2013), another post-certification effort that may improve CNA performance is greater integration of CNAs into the care team. Previous research has shown that CNAs benefit from both increased supervision and increased autonomy (Choi & Johantgen, 2012; Currie et al., 2005). Increased supervision by attentive and trained supervisors has been shown to aid retention and application of knowledge and skills (Besdine et al., 2005). At the same time, CNAs are often not able to effectively perform clinical tasks because they are not told how their work fits into a resident's care plan. In the present study, CNAs had great difficulty accurately assessing the resident's needs and gathering appropriate information for the nurse. Incorporating CNAs into the caregiving team and letting them in on care decisions both increases CNA autonomy and provides a context for care actions which can increase CNA effectiveness. When they know what the plan is, it is easier for CNAs to know what to do.

Finally, the results suggest that language proficiency can be a barrier to effective communication and care. There is no doubt that people who are not fluent in standard American English will increasingly perform direct care jobs (Besdine et al., 2005). However, it is not yet clear what level of English proficiency is necessary for quality

care. Beyond basic literacy, education in formal, academic English may not improve the communicative skills of direct care workers. Of more benefit may be English for Specific Purposes training that is conducted in conjunction with ongoing skills practice. CNA instructors, trainers and supervisors understand communicative competencies that CNAs need in order to provide quality care, and therefore they should coordinate with English language professionals to provide targeted communicative English instruction.

There were a number of limitations to the study. The study used a small, convenience sample of African immigrants working in LTC facilities in metropolitan Washington DC. The small number of participants and the homogeneity of the group limit the generalizability of the findings. Additionally, while both the care challenges presented in the video scenarios and the CNAs' responses received high ratings of verisimilitude, responding to a video cannot be expected to be exactly the same as responding to a real person. Because analysis included no resident dialogue in the one-way interactions, the dynamic effect of resident contribution to communication was not examined. For this reason, some aspects of communication such as turn taking and interrupting, could not be explored. Further, actual interaction would provide the opportunity for additional non-verbal communication cues (such as eye contact and touch). Finally, resident perceptions of quality care were not taken into account. While CNA experts and CNAs themselves can provide useful feedback on quality of care, residents may have a different perspective on elements of communication that enhance their quality of life.

Despite these limitations, the results provide insight into areas of immigrant CNA communication that may need improvement. This study was an initial attempt to describe

elements of CNA communication that may detract from quality of care. Moving beyond previous research that found that CNAs need improved training, the current study identifies specific training areas that should be targeted in order to improve quality of care for residents in nursing homes.

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<b>Table 1 text introductions and scripts of video scenarios</b>			
<b>Scenario</b>	<b>Introductory Text</b>	<b>Script</b>	<b>Open-ended questions for “think aloud”</b>
<b>Intros</b>	You are new to the floor. Check in on the resident in Room 223. Her name is Miss Mattie. Speak to the camera as if you are talking directly to the resident.	Resident: Good morning. I haven’t seen you here before. Are you going to be the one to take care of me from now on?	You will see the videos again. Talk to the camera about what you were thinking when you responded to the resident. What should a CNA do in this situation?
<b>Depressed</b>	Miss Mattie usually looks forward to meals in the dining room. Today she has not come down for any meals. Your supervisor has asked you to take Miss Mattie to the dining room.	Resident: I’m just not hungry today. I don’t want to go downstairs and listen to all those people chattering and talk too much. My daughter was supposed to come today but she couldn’t come. One of the kids was sick and just with a running nose too. I guess nobody wants to see an old lady anyway. No. I’m not hungry. I don’t want to go downstairs. I don’t want to be around all those chattering people. I want to stay right here.	What were you thinking when you responded to Miss Mattie? How should a CNA respond in this situation?
<b>Feeling Cold</b>	Miss Mattie can’t seem to get comfortable. She is calling for assistance.	Resident: Oh there you are. I called for someone and nobody came. It’s awfully cold. It’s been so cold and I got an extra blanket and it didn’t help at all. I’m still cold. Aren’t you cold? It’s not right. It’s so cold in here. It’s not right to turn down the heat and forget about folks.	How do you respond to residents who complain? How should a CNA respond in this situation?

<b>Pain</b>	Miss Mattie has been tired today. She has been in bed since after breakfast. You are checking in on her.	Resident: Oh there you are. Something's wrong. I'm not well. I called for someone. Could you get the nurse? I have pain here. I need some help. Something's not right.	How do you know when to call the nurse or get help? How should a CNA respond in this situation?
<b>Change of routine</b>	It is time to help Miss Mattie with her bath. She usually likes to bathe and needs help with her change of clothes. When you knock and enter, you see that her daughter is visiting. Respond to Miss Mattie's daughter.	Daughter: Just give us a few more minutes to say good-bye. I don't think mom wants a bath today. Can you take her out for a walk instead?	How do you deal with family members who want to change the routine? How should a CNA respond in this situation?
<b>Checking in</b>	Miss Mattie's daughter wants to talk to you in the hall. She has not visited for a while. Respond to Miss Mattie's daughter.	Daughter: How's she been doing? I've been so busy lately. It looks like she's losing weight or something. How's she doing?	How do you deal with family members? How should a CNA respond in this situation?
<b>Wants to chat</b>	It has been a busy afternoon. You have 4 residents to check and the nurse supervisor has asked to see you as soon as possible. You begin by quickly checking in on Miss Mattie.	Resident: Oh, how are you this morning? I saw you downstairs but you didn't see me. Come and see a picture of my grandbaby. This is Miss Celeste. Isn't she cute? Aren't they adorable? That's my baby.	What do you do when residents want to chat and you are busy? How should a CNA respond in this situation?
<b>Confused</b>	As you are passing by, you hear noises from Miss Mattie's room. Miss Mattie seems agitated so you go in to calm her down.	Resident: What? Where? What is this place? I'm sorry, but I'm trying to find out... where I am? I'm not sure...	What helps residents who are confused? How should a CNA respond in this situation?

**Can't  
speak**

It is the end of the day.  
You go in to say  
goodnight to Miss  
Mattie.

Resident: (lying in bed,  
tries to speak but can't  
get words out.)

What should a CNA  
do when a resident  
has trouble  
speaking?

**Table 2 Behaviors that detract from experts' ratings of CNA quality care**

<b>Problem area</b>	<b>Example</b>	<b>Expert comment</b>
<b>Language use</b>	<i>Good morning! I'm your nurse today.</i>	<i>She is NOT a nurse and should not call herself a nurse.</i>
<b>Orientation</b>	<i>Yes Ma'am. I'll be the one taking care of you from now on.</i>	<i>The CNA should state the resident's name, let the resident know who she is and state her purpose for being there.</i>
<b>Giving choice</b>	<i>I'm going to put socks on your feet.</i>	<i>The resident needs to have some control.</i>
<b>Knowing when to call for help</b>	<i>Ok just hang in there. Let me quickly call your nurse so she can come in and give you your medications.</i>	<i>Don't bother the nurse! The resident doesn't need meds just because she's cold.</i>
<b>Assessing the situation</b>	<i>How are you feeling?</i>	<i>Resident just said she was not feeling well. Ask more specific follow up.</i>
<b>Meeting psychosocial needs</b>	<i>Good night. I am leaving now.</i>	<i>She should show more compassion because the resident can't speak.....try and lessen the anxiety that she must be expressing.</i>
<b>Lying/false reassurance</b>	<i>Nobody is going to say anything to you and once you're done I'll take you back to your room Ok? Never mind your daughter will come and see you as soon as possible.</i>	<i>He doesn't know that. Don't make stuff up.</i>
<b>Building relationships</b>	<i>I hate the family. But some families are nice. Some are mmm hmmm. But anyways. I would do what she says. Just pause, listen do what she says and leave.</i>	<i>Work with her. Ask the daughter to help bathe her mother.</i>

## DISCUSSION

This chapter summarizes the research findings, discusses the strengths and limitations of the study, the implications of the research findings, and finally suggests potential areas for future research.

### **Summary of Findings**

The overall aims of this research were to 1) describe patterns of routine communication used by immigrant CNAs in a standardized care case; 2) examine the relationship between immigrant CNA communication patterns and expert ratings of quality; 3) describe the relationship between immigrant CNA spoken English proficiency, language patterns and quality; 4) examine the relationship between immigrant CNAs' self-ratings and expert ratings; 5) describe factors related to quality CNA care.

### *Immigrant CNA Patterns of Communication*

The CNA communication in this study was nearly equally divided between instrumental and socio-emotional communication. The largest proportion of CNA communication was devoted to emotional rapport building and giving orientation and directions. Earlier research found that CNAs engage in socio-emotional communication relatively infrequently (Carpiac-Claver & Levy-Storms, 2007; Williams, Ilten, & Bower, 2005). For example, the CNAs in William's study were primarily task focused. However, the present study showed that CNAs may attend to socio-emotional communication more than previously thought. Further, the present study showed that CNA communication varies depending on context. CNAs use different communication strategies to respond to varying care challenges.



### *Communication Patterns and Quality*

The findings of this study suggest that quality communication depends on context. The communication behaviors associated with higher quality ratings varied across the care challenges presented in the study. Content is an important aspect of CNA communication. Knowing what to respond is as important for CNAs as knowing how to respond. Also, social and psychosocial exchange were related to quality while other types of communication were not.

There has been little previous research focusing on elements of CNA quality. However, the finding that social and psychosocial exchange were associated with quality of care ratings supports interventions that have sought to increase the effectiveness of socio-emotional CNA communication (Braun, Cheang, & Shigeta, 2005; Burgio et al., 2001).

### *Spoken English Proficiency, Communication and Quality*

Spoken English proficiency was shown to influence communication behaviors. For example, CNAs with higher ratings of language proficiency used more biomedical counseling across three scenarios (depression, feeling cold and change of plans). The present study also indicates that there is a relationship between the language skills of immigrant CNAs and the quality of care they provide. Immigrant CNAs may struggle with vocabulary or language forms necessary to communicate with residents. It is also possible that CNAs who are attending to language tasks have a harder time attending to care tasks.

Language proficiency and accent have been shown to influence perceptions of care (Martin, Lowell, Gzodziak, Bump, & Breeding, 2009; Ryosho, 2011). However,

exactly how language proficiency affects quality of care has not been described. The current findings are more congruent with studies of foreign born nurses and IMGs which suggested that language proficiency was an element of quality separate from clinical expertise (Eggly, Musial, & Smulowitz, 1999; Hall, Keely, Dojeiji, Byszewski, & Marks, 2004; Kingma, 2007). Further, in the qualitative analysis, experts gave specific examples of how language proficiency detracted from quality when communication between CNAs and residents was impeded.

### *Self-ratings and Expert Ratings*

CNA self-ratings of quality were not closely related to expert ratings of quality. These findings are in line with previous studies that have also found a discrepancy between provider self-ratings and actual clinical performance (Baxter & Norman, 2011; Cole, 2009). CNAs with more education tended to give themselves lower quality ratings, agreeing with previous studies showing that academic training improves self-evaluation skills (Wilson & Lindsey, 1999).

CNAs' and linguists' ratings of spoken English proficiency were related. English language education may have taught the CNAs some self-evaluation skills in the area of language proficiency. It is also possible that this is an area that they receive frequent feedback in unlike the quality of their CNA care. That linguists' ratings of language proficiency were not related to having learned English at a young age or speaking English at home indicates that CNAs and linguists may have different criteria for language proficiency.

### *Factors Related to Quality*

In addition to being related to communication patterns and language proficiency, immigrant CNA quality was also associated with age and length of professional experience as a CNA and intent to leave the CNA profession. Those who are most likely to plan to move into other professions are those with the highest quality ratings. This may be explained by the limited prospects for career growth in the CNA profession. Also, those CNAs who plan to pursue further medical education or certification may have greater skills and familiarity within the health field (Hussein & Manthorpe, 2005; Priester & Reinardy, 2003).

In the qualitative analysis, eight themes emerged related to the quality of the CNAs' responses to standardized care challenges: language use, orientation, giving choice, calling for help, assessing the situation, meeting psychosocial needs, lying/giving false reassurance and building relationships. While the CNAs and the experts agreed on the importance of many of these factors, CNA performance did not always exemplify the elements of quality. While the CNAs in this study used both instrumental and socioemotional communication, generally they were task oriented and often focused on "getting the job done." This may reflect the stress of a job with low levels of autonomy (Currie, Harvey, West, McKenna, & Keeney, 2005). CNAs are vulnerable to the demands of supervisors, residents and family members (Berdes & Eckert, 2007; Dodson & Zinbarg, 2007; Stacey, 2005).

### **Strengths and Limitations**

The strengths of this study include its use of the "talk to the camera" method for exploring CNAs' communication in standardized care cases. This type of data gathering may be recommended in future CNA communication research. The videos of care

challenges were given high ratings of realism and utility. This type of data collection allows for the examination of CNA communication patterns without the difficulties and disadvantages of disrupting resident-care routines. Additionally, this mode of data collection eliminates the confounding effects of different residents' traits on CNA communication behaviors. While the homogeneity of the sample could be considered a limitation, it did control for some factors.

There were a number of limitations to the study including limitations in the study sample. The small, homogeneous convenience sample may limit the generalizability of the findings. The design of the study also introduces some additional limitations. Despite the high ratings of verisimilitude, responding to a video is not the same as interacting with a real person. Because analysis included no resident dialogue in the one-way interactions, the dynamic effect of resident contribution to communication was not examined. For this reason, some aspects of communication such as turn taking and interrupting, could not be explored. Further, actual interaction would provide the opportunity for additional non-verbal communication cues (such as eye contact and touch). Finally, resident perceptions of quality care were not taken into account. While CNA experts and CNAs themselves can provide useful feedback on quality of care, residents may have a different perspective on elements of communication that enhance their quality of life.

## **Implications**

Results of this study suggest several areas for improvement in the training and certification of immigrant CNAs. The Congressional Commission on Long-term Care (2013) recently issued a report containing recommendations for how to address the

growing need for long-term care services in the United States. The commission also recommend some structural changes to the CNA profession as a whole such as providing more meaningful career ladders for CNAs. The results of the present study support many of the Commission's recommendations for the direct-care workforce. The recommendations based on this study also echo previous recommendations about the need for improved CNA training prior to certification (Commission on Long-term Care, 2013; Feuerberg, 2001).

Prior to certification, immigrant CNAs may benefit from more rigorous training. CNAs must be flexible in their communicative approach to different care challenges. These findings highlight the importance of training CNAs to respond appropriately to a variety of care challenges. Rather than training CNAs in any particular type of communication behavior, training should enable CNAs adapt their responses to a wide variety of care contexts. As previously recommended CNA training curricula should include increased training in skills such as communication, critical thinking and empathy (Feuerberg, 2001) .

Additionally, there is a need for a minimum standard of spoken English proficiency prior to certification. For those who do not meet this level of English proficiency, English for Specific Purposes training is recommended. This type of training, rather than academic English training, will prepare CNAs for contextually appropriate spoken communication in English.

There are several post-certification measures that may improve immigrant CNA quality. Immigrant CNAs may benefit from quality continuing education in clinical skills training. Increased supervision and mentoring may improve clinical decision making and self-evaluation skills which have not been developed during training.

Another post-certification effort, recommended by the Congressional Commission, that may improve CNA performance is greater integration of CNAs into the care team (2013). This would increase CNA autonomy and improve decision making as well as encouraging CNAs to build relationships with co-workers and resident's family members. Finally, ongoing English for Specific Purposes training for context specific communication may give immigrant CNAs the vocabulary and practice they need to communicate more effectively with residents.

### **Future Directions**

The present study was a small, descriptive, pilot study. Given the intriguing results, more research in this area is warranted. Potential avenues to consider include comparisons of immigrants and non-immigrants, further research into communication patterns and clinical skills, geographical diversity and expanding this type of research to Home Health Aides.

The present study only examined communication patterns of immigrant CNAs. Though it may be obvious that immigrant CNAs would have greater communication difficulties than non-immigrant CNAs, it's also true that non-immigrant CNAs report considerable difficulty with communication as well. It would be valuable to compare the communication patterns and difficulties of immigrants and non-immigrants. It is possible that non-immigrants may also benefit from targeted, contextual communication training. Further, non-immigrants may employ strategies that could benefit immigrants in communicating with residents.

Investigating different measures of quality care might give a more complete picture of how CNAs impact nursing home quality. For example, including resident ratings of quality would provide insight into areas that impact resident quality of life.

Additionally, looking at CNA clinical skills and resident outcomes would be interesting and informative.

The present research could also be expanded by increasing geographic diversity of the sample population. Immigrants from different areas of the globe tend to congregate in particular areas of the United States. The present study, in the Baltimore-Washington metropolitan area, was comprised of African immigrants. In other parts of the United States immigrants from other parts of the world would be more prevalent. Comparing the communication patterns and difficulties of different groups of immigrants would provide greater insight into immigrant CNA communication overall.

Finally, Home Health Aides are the fastest growing sector of the direct-care workforce. The Congressional Commission on Long-term Care recommended that this workforce be relied on to help family caregivers and improve home care for those in need of multiple and ongoing long-term care services (2013). The commission further recommended certification for all Home Health Aides. Examining the communication of Home Health Aides in the non-institutional caregiving context would give further insight into how setting impacts the relationship of communication and quality.

Questions remain about the relationship of immigrant status, communication and quality, but the present study provides a starting point for further research into this important area. As America is rapidly aging, now is the time to ensure that quality care is available to those who need it in the coming years. Further, if immigrants are to be relied on to undertake the important task of caring for the elders of our society it is important

that they have the opportunity to work in a profession that is respected and that respects their knowledge and skills.



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## **Appendix A: Study Design and Methods**

The study utilized an exploratory, descriptive design to gather data on immigrant CNA communication patterns. Data was gathered by videotaping CNAs' performances in response to standardized care challenges presented in brief video clips in a "talk to the camera" simulation. This study was a stand-alone project which was reviewed and approved by the Johns Hopkins School of Public Health Institutional Review Board as well as the Prince Georges Community College Institutional Review Board. All participants provided oral informed consent, including willingness to be videotaped, prior to enrollment in the study.

### **Sample and Setting**

A convenience sample of 35 immigrant CNAs was recruited from the population of students at Prince Georges Community College through recruitment flyers and recruitment tables. CNAs were eligible to participate if 1) they had been born outside of the United States and 2) were currently working as a CNA. Data was collected on the campus of Prince Georges Community College in a private room away from other activities. All 35 CNA subjects completed the background questionnaire. However, there were only 32 useable videos because one CNA did not have time to complete the study, the camera did not record one of the CNAs and one of the CNAs did not talk at all during the recording. For similar reasons, there were only 34 completed post-questionnaires.

Overall, 35 (100%) of the subjects identified as Black/African American and 27 were women (77%). The average age of the subjects was 32 years old. The majority, 21 of the subjects, had lived in the United States for less than 3 years (60%) and most were permanent residents of the United States (77%). About half of the subjects were single

(55%) and all but one had completed high school (97%). Overall demographic data for the 35 CNAs are presented in **Table 2**.

### **Preliminary work: video creation**

In preparation for data collection, videos were created of nine brief (~10 seconds) care challenges portraying an elderly female nursing home resident. The intent of the care challenge videos was to simulate situations that would require communication tasks similar to those encountered in the day to day work of a CNA in a long-term care facility. Care challenges were developed based on observations of CNAs interacting with patients in long-term care settings, review of the literature, informal conversations with CNAs and discussions with CNA instructors. Using the information gathered from these sources, 12 care challenges were developed, three involving a co-worker, seven depicting a long-term care resident and two with a visiting family member. The primary function of the co-worker challenges was to frame the patient challenges and offer initial practice with responding to challenges on the computer. The resident care challenges were developed around a 78 year-old female resident in a long-term care facility.

Actors portraying the coworker, the resident and the family member were given scripts and coached for accuracy of performance. They were then digitally video recorded acting out the scripted care challenge. The completed videos of the care challenges were viewed by a panel of CNA instructors who confirmed their appropriateness for the purposes of the study. The completed videos of the care challenges were loaded into a computer program and paired with text which introduced and explained how to respond to each challenge. **Table 1** presents the care challenge scripts along with the accompanying text.

## Data Collection

At the start of their participation in the study, CNAs gave informed consent and were told that the goal of the study was to learn how immigrant CNAs communicate with patients. Then CNA subjects completed a survey that included questions about demographic information (age, race, and county of origin), education and training, languages spoken, job history, experience caring for old people and self-efficacy. The investigator then oriented the subject on how to view and respond to the care challenge videos by showing the first challenge of the co-worker and allowing the CNA to respond as if speaking directly back to the coworker. The investigator, after making sure the subject knew how to advance through the vignettes turned on the video camera in order to capture participants' responses and left the room. The investigator was available outside of the room in case subjects had any additional questions during data collection. After responding to the 12 care challenges in sequence, CNAs were instructed to view a subset of the care challenges again. On the second viewing, they were instructed to answer questions related to the challenges. The questions were presented as text along with the care challenges and were designed to capture qualitative information. **Table 1** presents the questions that were presented to subjects on the second viewing of the care challenges. Finally, subjects completed a follow-up questionnaire that asked about their experience viewing and responding to the care challenges.

Subjects' responses to the care challenges and to the qualitative questions were transcribed. The transcribed responses were coded with the Roter Interaction Analysis System (RIAS), the most widely used single system for medical interaction assessment (D. Roter & Hall, 2006) while responses to the second-viewing questions underwent

qualitative analysis. Two sets of expert ratings were given to the video responses. An English language expert rated each subject using a spoken English rating scale. CNA instructors rated the video responses for quality of care given by the CNA.

## **Measures**

### *Spoken English Rating Scale*

A Measure of spoken English proficiency, developed based on a review of the literature and expert input, was used to rate various aspects of the language patterns of CNAs in their videotaped responses. Ratings were conducted by a linguistic expert with over ten years' experience in applied linguistics. The spoken English of each subject was rated on four sub-scales: Structure, word choice, rhythm and accentedness. Each component was assessed using a 5-point Likert-type scale. Subjects received low ratings for areas of speech that interfered with comprehensibility and high ratings in areas that added to comprehensibility. The highest rating in each area indicates native-like facility in that area.

- Structure was defined as the ability to produce meaningful grammatically and syntactically accurate English sentences. For this subscale, structure was measured on a 5-point Likert scale ranging from:
  - 1- structure errors greatly interfere with comprehensibility.
  - 2- structure errors occasionally interfere with comprehensibility.
  - 3- structure errors rarely interfere with comprehensibility
  - 4- some structure errors that do not interfere with comprehensibility
  - 5- no noticeable structure errors.
  
- Word choice indicates that common vocabulary is used in typical context. For this subscale, word choice was measured on a 5-point Likert scale ranging from:
  - 1- Word choice greatly interferes with comprehensibility.
  - 2- Word choice occasionally interferes with comprehensibility.
  - 3- Word choice rarely interferes with comprehensibility
  - 4- Word choice does not interfere with comprehensibility

5- Native-like American English word choice.

- Rhythm includes phrasing and timing of speech that aids fluency and comprehension. For this subscale, rhythm was measured on a 5-point Likert scale ranging from:

- 1- rhythm greatly interfere with comprehensibility.
- 2- rhythm occasionally interfere with comprehensibility.
- 3- rhythm rarely interfere with comprehensibility
- 4- non-native like speech rhythm that do not interfere with comprehensibility
- 5- native-like American English speech rhythm.

- Accentedness relates to the pronunciation of consonants, vowels and stress in a native-like manner. For this subscale, accentedness was measured on a 5-point Likert scale ranging from:

- 1- accent greatly interfere with comprehensibility.
- 2- accent occasionally interfere with comprehensibility.
- 3- accent rarely interfere with comprehensibility
- 4- noticeable accent that not interfere with comprehensibility
- 5- no noticeable accent

Cronbach's alpha was used to estimate the internal consistency of the Spoken English proficiency scale. A Chronbach's alpha of .80 shows the measure to have a reasonably high degree of internal consistency. Intracoder reliability of the measure was established by double coding of 10 videotapes by the same rater. Intracoder reliability of the measure was established by double coding of 10 videotapes by the same rater ( $\kappa=.92$ , 95% CI= .69-.98). Scale reliability correlations were calculated for the four components of the spoken English proficiency scale to assure that each item contributes to the overall total. The scale had a possible range of 5-20 while the actual scores ranged from 7 to 17.5 with a mean (sd) of 12.19 (2.63).

#### *Quality of Care Rating*

CNA quality of care was assessed by a CNA instructor with 15 years' experience providing clinical on the job training with CNAs in nursing home settings. In preparation



for assigning an overall rating of quality, the rater was asked to view the CNA response sets and provide ratings on the following dimensions of quality:

- Medical Concerns: CNA addresses medical concerns. CNA asks questions about symptoms, takes vital signs, recognizes symptoms of potential concern and gives medical care as appropriate
- Emotional Concerns: CNA addresses emotional concerns. CNA is encouraging, recognizes emotional needs, displays empathy, is reassuring and calming.
- Recognizing individuality: CNA treats resident as individual. CNA uses resident's name, actively listens to concerns and responds to the individual situation.
- Shared Decision making: CNA and resident work together to address concerns. CNA gives a choice, offers alternatives and is not pushy.
- Next steps: CNA says what will happen next. CNA does not take action without permission, informs of upcoming plans, refers to a schedule and tells what he/she will do next.
- Language: CNA uses language appropriate to the task. CNA uses appropriate vocabulary and is easy to understand.
- Demeanor: CNA displays appropriate demeanor. CNA is polite, respectful, and friendly, shows appropriate concern and is upbeat and professional.

After practicing on a subset of responses, the expert rater was asked to provide an overall rating of CNA quality of care to all of the CNA response sets. A rating of 10 indicated the highest quality of care and 1 indicated the lowest. . Reliability of the expert ratings was assessed by having a random selection of 12 response sets double-coded by a second

rater with over five years of experience in supervising CNAs. Inter rater reliability, assessed by calculation of a Pearson correlation coefficient between the two raters was .896 (95% CI=.681-.969). The overall ratings of CNA quality of care ranged from 1 to 10 with a mean of 4.6 and standard deviation of 2.38).

#### *Roter Interaction Analysis System (RIAS)*

The 32 response sets were coded by trained raters using the Roter Interaction Analysis System (RIAS). The RIAS has also been widely used in a variety of medical contexts, including primary care, oncology, geriatrics and nursing and is a well-validated communication measurement instrument. The coding unit of analysis is a complete thought and each thought is assigned to a single mutually exclusive code category (Debra Roter & Larson, 2002). The length of the coding unit can vary from a single sound (for example, “Uhhhh.”) to a full sentence conveying (for example, “I am going to be the one taking care of you from now on.”).

In the present study, coded communication was reduced from 40 categories to ten code composites including: 1) data gathering about biomedical topics; 2) data gathering about psychosocial topics ; 3) patient education and counseling about biomedical topics; 4) patient education and counseling about psychosocial topics); 5) positive exchange, 6) negative exchange; 7) emotional talk; 8) social chit chat; 8) facilitation; 9) partnership building and activation; and 10) orientation and instruction. These coding categories were grouped with relation to either instrumental or socio-emotional communication tasks.

#### *CNAs Self-ratings*

**Quality:** CNAs were asked to rate the quality of their caregiving in their responses to the

care challenges by considering several areas including communication skills and technical skills. The overall quality rating, which was used for analysis, ranged 6 to 10 with a mean (sd) of 8.5 (1.3).

***Spoken English proficiency:*** CNAs self-rated their English language skills on four domains, speaking, listening, accent and vocabulary, on a 5-point Likert scale. These were combined for an overall score. The self-ratings ranged from 5 to 15 with a mean of 10.7 and standard deviation of 2.7.

### **Validity**

Validity of the CNA responses was assessed in several ways. Quantitative ratings of verisimilitude (realism) were provided both by CNAs in the post-questionnaire and by the expert raters. Additionally, qualitative ratings of verisimilitude were provided by a panel of CNA instructors. All measures of verisimilitude indicated that CNA responses to the video vignettes were highly similar to what would be observed in an actual nursing home setting.

<b>Table 1 Care Challenge text introductions, scripts and “think-aloud” questions</b>			
<b>Scenario</b>	<b>Introductory Text</b>	<b>Script</b>	<b>Open-ended questions for “think aloud”</b>
<b>Introductions</b>	You are new to the floor. Check in on the resident in Room 223. Her name is Miss Mattie. Speak to the camera as if you are talking directly to the resident.	Resident: Good morning. I haven’t seen you here before. Are you going to be the one to take care of me from now on?	You will see the videos again. Talk to the camera about what you were thinking when you responded to the resident. What should a CNA do in this situation?
<b>Depressed</b>	Miss Mattie usually looks forward to meals in the dining room. Today she has not come down for any meals. Your supervisor has asked you to take Miss Mattie to the dining room.	Resident: I’m just not hungry today. I don’t want to go downstairs and listen to all those people chattering and talk too much. My daughter was supposed to come today but she couldn’t come. One of the kids was sick and just with a running nose too. I guess nobody wants to see an old lady anyway. No. I’m not hungry. I don’t want to go downstairs. I don’t want to be around all those chattering people. I want to stay right here.	What were you thinking when you responded to Miss Mattie? How should a CNA respond in this situation?
<b>Feeling Cold</b>	Miss Mattie can’t seem to get comfortable. She is calling for assistance.	Resident: Oh there you are. I called for someone and nobody came. It’s awfully cold. It’s been so cold and I got an extra blanket and it didn’t help at all. I’m still cold. Aren’t you cold? It’s not right. It’s so cold in here. It’s	How do you respond to residents who complain? How should a CNA respond in this situation?

		not right to turn down the heat and forget about folks.	
<b>Pain</b>	Miss Mattie has been tired today. She has been in bed since after breakfast. You are checking in on her.	Resident: Oh there you are. Something's wrong. I'm not well. I called for someone. Could you get the nurse? I have pain here. I need some help. Something's not right.	How do you know when to call the nurse or get help? How should a CNA respond in this situation?
<b>Change of routine</b>	It is time to help Miss Mattie with her bath. She usually likes to bathe and needs help with her change of clothes. When you knock and enter, you see that her daughter is visiting. Respond to Miss Mattie's daughter.	Daughter: Just give us a few more minutes to say good-bye. I don't think mom wants a bath today. Can you take her out for a walk instead?	How do you deal with family members who want to change the routine? How should a CNA respond in this situation?
<b>Checking in</b>	Miss Mattie's daughter wants to talk to you in the hall. She has not visited for a while. Respond to Miss Mattie's daughter.	Daughter: How's she been doing? I've been so busy lately. It looks like she's losing weight or something. How's she doing?	How do you deal with family members? How should a CNA respond in this situation?
<b>Wants to chat</b>	It has been a busy afternoon. You have 4 residents to check and the nurse supervisor has asked to see you as soon as possible. You begin by quickly checking in on Miss Mattie.	Resident: Oh, how are you this morning? I saw you downstairs but you didn't see me. Come and see a picture of my grandbaby. This is Miss Celeste. Isn't she cute? Aren't they adorable? That's my baby.	What do you do when residents want to chat and you are busy? How should a CNA respond in this situation?
<b>Confused</b>	As you are passing by, you hear noises from Miss Mattie's room. Miss Mattie seems	Resident: What? Where? What is this place? I'm sorry, but I'm trying to find out...	What helps residents who are confused? How should a CNA respond

	agitated so you go in to calm her down.	where I am? I'm not sure...	in this situation?
<b>Can't speak</b>	It is the end of the day. You go in to say goodnight to Miss Mattie.	Resident: (laying in bed, tries to speak but can't get words out.)	What should a CNA do when a resident has trouble speaking?

Table 2 CNA demographic characteristics		
	N	%
Race/ethnicity		
black	35	100
gender		
male	8	22.9
female	27	77.1
age		
<26	9	25.7
26-35	17	48.6
>35	7	20.0
Marital status		
Single/divorced/widowed	23	65.7
Married/partnered	12	34.3
Education		
High school	18	51.4
Some post-high school	9	25.7
College graduate	6	17.1
Immigration status		
asylee	3	8.5
U.S. citizen	5	14.3
Permanent resident	27	77.1
Length of time in U.S.		
1 year or less	7	20
2-3 years	14	40
4-5 years	8	22.9
More than 5 years	6	17.1

## Meredith Massey

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### EDUCATION

**Ph. D. Public Health, Health Behavior and Society,** May 2014

Johns Hopkins School of Public Health, Baltimore, MD

Dissertation: Immigrant Certified Nursing Assistants in Institutional Long-term Care Facilities:  
Language Proficiency, Communication Patterns and Quality Care

Advisor: Dr. Debra Roter

Distinguished Doctoral Research Award, 2012-2013

**Master of Education in International Education.** May, 2001.

*Framingham State College, Education.*

**Master of Fine Arts in Photographic Communication.** May, 1997.

*Savannah College of Art and Design, Communication.*

**Bachelor of Arts in Humanities/Intercultural Studies.** June, 1992.

*Warren Wilson College, Asheville, NC. Minor: French*

Study-abroad term at *Friends World College, Kenya.* August 1990-June 1991.

### TEACHING EXPERIENCE

**Prince Georges Community College.**

August 2002 – Present

Associate Professor, Language Studies Department.

- Develop curriculum and teach all levels of English language instruction.
- Supervise adjunct faculty.
- Served as Departmental Assessment Coordinator

**Johns Hopkins University.**

Summer 2012

Instructor.

- Developed and taught the undergraduate course, "Public Health and the Internet." This course focused on how new technologies are changing health and health care.

**Johns Hopkins Bloomberg School of Public Health.**

January 2010 – January 2012

Teaching Assistant.

- Served as TA for numerous on-site and on-line courses including: Program Planning for Health Behavior Change; Health Communication Programs; Social and Behavioral



Foundations of Health; Food Production, Public Health and the Environment; Health Literacy and Interpersonal Communication.

## RESEARCH EXPERIENCE

### National Center for Health Statistics, Hyattsville, MD

Survey methodologist.

May 2012-present

- Serve as PI on survey evaluation projects.
- Conduct cognitive interviews.
- Write reports of cognitive interview findings.
- Worked with international team on evaluation of a multinational, UNICEF-sponsored violence against children survey in Malawi, Africa.

### Johns Hopkins Bloomberg School of Public Health, Center for Communication Programs and Department of Health Behavior and Society

Graduate Student: Data Analyst/Research Assistant.

December 2011-January 2013

- Wrote case studies for HIV linkage to care program evaluation.
- Analyzed data related to communication program baseline study in Tanzania.
- Contributed to grant application for evaluation of HIV communication messages in Tanzania.

## Peer Reviewed Publications

Clovis, J. B., Horowitz, A. M., Kleinman, D. V., Wang, M. Q., & **Massey, M.** (2012). Maryland Dental Hygienists' Knowledge, Opinions and Practices Regarding Dental Caries Prevention and Early Detection. *The American Dental Hygienists' Association*. 86(4), 292.

Benowitz-Fredericks, C. A., Garcia, K., **Massey, M.**, Vasagar, B., & Borzekowski, D. L. (2012). Body image, eating disorders, and the relationship to adolescent media use. *Pediatric Clinics of North America*, 59(3), 693-704.

Kaufman, M., **Massey, M.**, Tsang, S., Kamala, B., Serlemitsos, E., Lyles, E., & Kong, X. (2013). An assessment of HIV testing in Tanzania to inform future strategies and interventions. *Aids Care*. (In Review).

## Reports

Gulikers, G., **Massey, M.**, & Swartz, B. (2004). Standardizing Generation 1.5 Programs in Maryland. *Instructional Forum*. Prince Georges Community College. 19 (3).

**Massey, M.**, Chepp, V., Creamer, L., Ramirez, F.. (2013). Testing of the Questions on Second Hand Smoke for the National Health and Nutrition Examination Survey

(NHANES): Results of Interviews Conducted 09/18/12-01/30/13. National Center for Health Statistics. Hyattsville, MD

**Massey, M.,** Chepp, V.(2013). Testing of the Questions on Washington Group Questions on Child Functioning: Results of Interviews Conducted 09/18/12-01/30/13. National Center for Health Statistics. Hyattsville, MD

The End